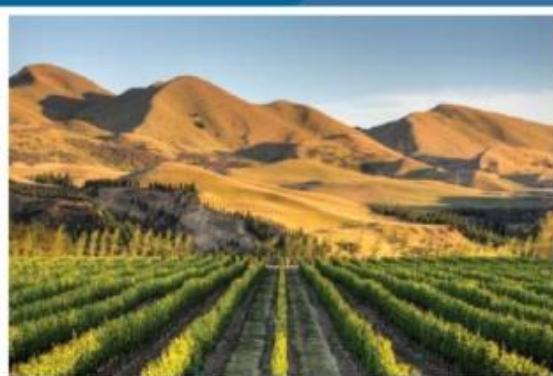




**Review of the International Collaboration
Landscape in Sustainable Agriculture**



**NATIONAL
LAND RESOURCE
CENTRE**

Review of the International Collaboration Landscape in Sustainable Agriculture

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1 Executive Summary

The KBBE (Knowledge Based Bio-Economy) Forum is a partnership between New Zealand, Australia, Canada, and the European Commission. The partnership was established to share knowledge, foster collaboration, and promote relevant joint activities to stimulate innovation in the bio-economy sectors.

Within the KBBE Forum is a specific theme on Sustainable Agriculture (SAT). This project reviews the international sustainable agriculture landscape to determine the possibility of *building on collaborations or international opportunities* that have already gained traction, and thereby accelerate progress within the theme.

This report summarises the results of a desktop study that included:

- A scan of the global political landscape revealing key trends relating to sustainable agriculture
- A review of agricultural policy directions, particularly those in the KBBE partner regions, demonstrating a common focus on themes such as: *Increased productivity & food security; Agriculture innovation & technological development; and Sustainability, resource efficiency & resilience.*
- A review of international collaborative initiatives and networks suggesting that over the last 5 years there has been a growing trend in the establishment of international networks to support multilateral partnerships, multi-disciplinary research, cross-sector knowledge exchange, and strategic policy development.
- An analysis of the fit of selected Collaborative Initiatives to KBBE SAT (in the form of a SWOT analysis) and the activities that would enable access and alignment (in the form of a roadmap).

The review highlights significant convergence of thinking both globally and across the KBBE partners, as countries try to recover from the global financial crisis and meet the sustainability goals coming out of Rio+20. The emergence of 'Green Growth' as a conceptual approach for achieving economic and environmental resilience is gaining widespread and global endorsement.

2014 is revealed as a critical year for forming and cementing key collaborative initiatives, while 2015 offers the opportunity to ride the coattails of high profile events and review the Post-2015 Sustainable Development Agenda.

Five alignment opportunities were therefore identified as helping to make progress in KBBE SAT by enhancing collaboration and providing alternative resourcing options:

- Aligning KBBE SAT activities with the EU's Horizons 2020 Agenda
- Networking and exploring the alignment opportunities for KBBE SAT with the emerging 'Green Growth Agenda'

- Networking and keeping pace with the UN's Post-2015 Sustainable Development Programme
- Leveraging from multi-lateral platforms in the Sustainable Agriculture domain
- Building from the momentum of the Global Soil Partnership and taking advantage of the 2015 International Year of Soils.

A suite of recommendations to guide the agencies involved in setting and delivering the sustainable agriculture agenda in New Zealand are also made.

2 Background

2.1 Purpose of the review

The KBBE (Knowledge Based Bio-Economy) Forum is a partnership between New Zealand, Australia, Canada, and the European Commission. The partnership was established to share knowledge, foster collaboration, and promote relevant joint activities to stimulate innovation in the bio-economy sectors.

Within the KBBE Forum is a specific theme on Sustainable Agriculture (SAT). This theme is driven by the need to address challenges such as globalisation and economic crisis, guaranteeing food security while adapting to a changing climate, reducing the environmental impact of agriculture and industry, and maintaining an affordable, safe, healthy, and nutritious food supply.

The partners in the KBBE Forum have agreed that funding will be made available in each country to support initiatives such as scientific workshops, twinning workshops, training, summer schools, staff exchanges, and coordinated calls for research projects across the four main themes. However, progress within KBBE SAT has been challenging as the four partners manage competing pressures for scarce resources as well as in-country changes in political agendas, research investment and organizational structure (e.g. Agri-Food Canada).

As theme leaders, New Zealand believes it timely to review the international sustainable agriculture landscape, including key trends, policy directions, and collaboration opportunities to determine if there is potential to accelerate progress in KBBE SAT by building on collaborations or international opportunities that have already gained traction.

The intention of this report therefore is to:

- review the international landscape in sustainable agriculture to guide the future activities of the SAT working group and maximise the likelihood of success
- Inform a response to the 'EU Non-paper on the Future of KBBE' and the potential reconfiguration of the KBBE thematic structure and its operation.

2.2 Project approach

To fulfil the aims identified above, a desktop study comprised the following sequential stages:

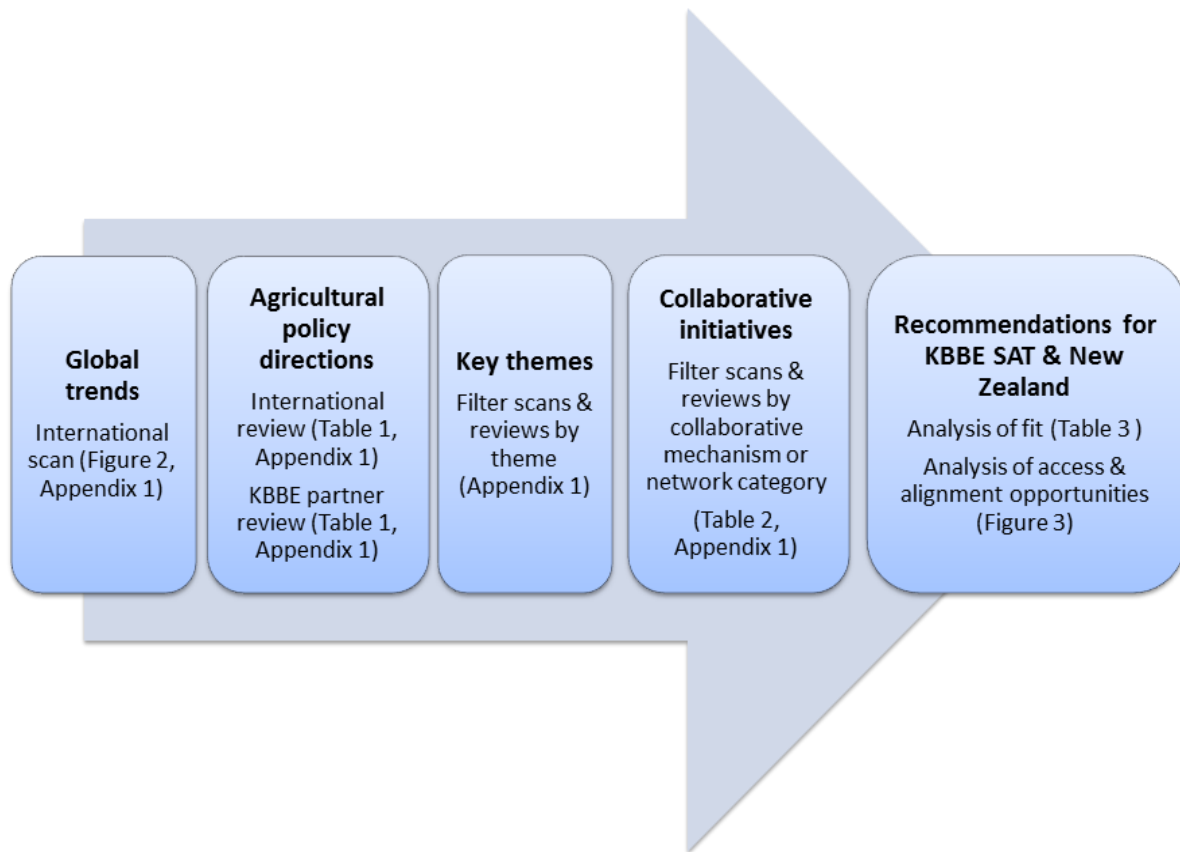


Figure 1 Project approach sequential stages from scanning to recommendations.

3 Review

3.1 Global trends

A scan of the global political landscape reveals a sequence of events that brings converging focus on a number of key trends relating to sustainable agriculture (as highlighted in Fig. 2).

2007/2008 was a critical year that required countries to consider how to improve the sustainability of agriculture in response to the global financial crisis and dramatic rise in food prices. The 'spike' in food prices was largely due to structural weaknesses in global food supply systems. Since 2008 there have been two more peaks in world food prices with indications that this volatility is likely to continue for the foreseeable future (The Spring 2011 Development Committee Report; Joint International Organizations Report to G20; and the World Bank's 2012 Global Monitoring Report).

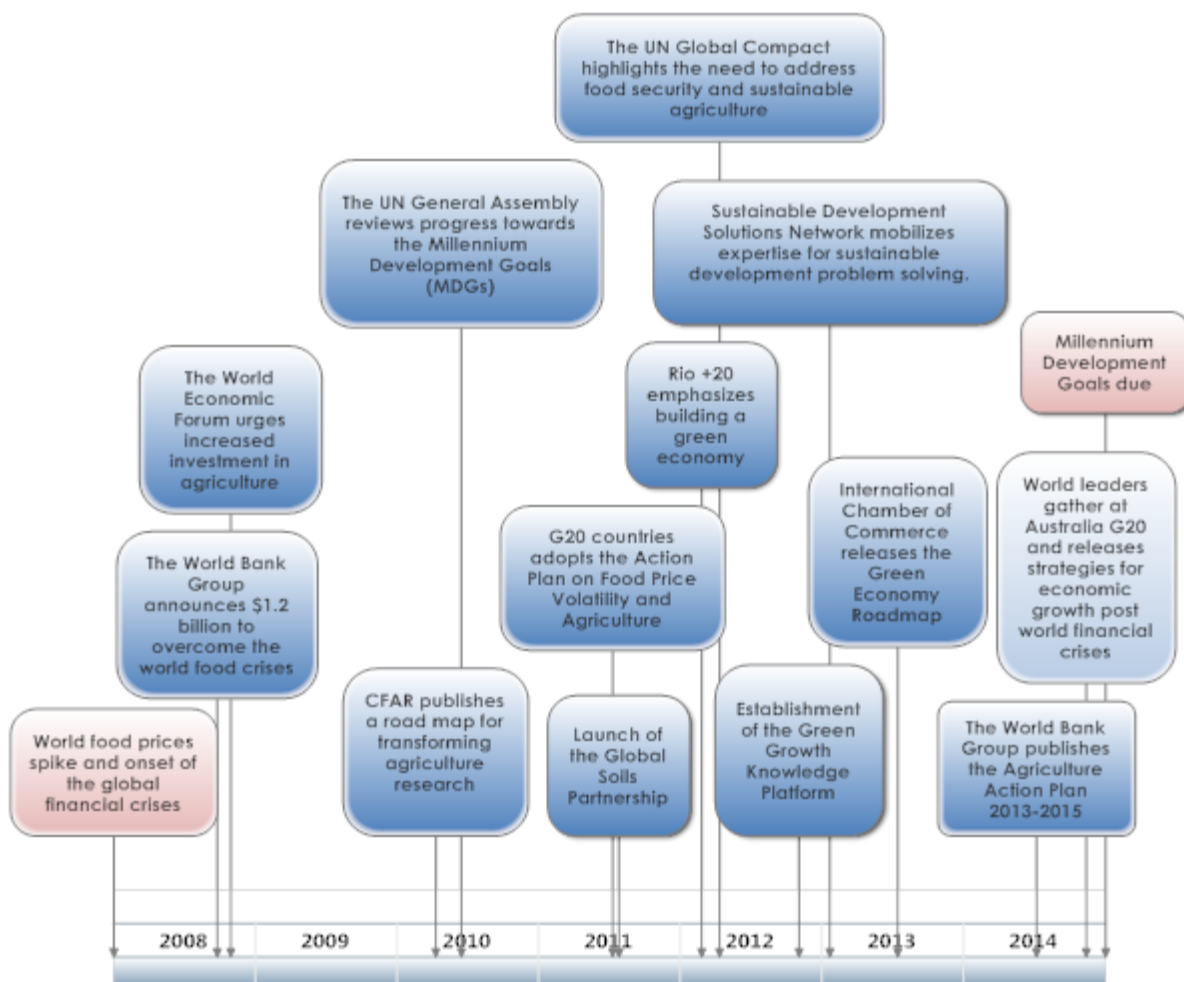


Figure 2 Timeline of global trends and the initiatives formed to respond to them.

Six years on from the global financial crisis, 'The Group of Twenty' (a group of finance ministers and central bank governors from 20 of the world's major economies) or 'G20' and allied countries remain focused on strengthening growth and creating jobs through coordinated and cooperative action among countries. Sustainable economic growth including sustainable agriculture remains a key pillar in the recovery programme for both developed and developing economies.

A feature of many of the commentaries from the World Economic Forum, World Bank, FAO (Food and Agriculture Organization of the United Nations), and the OECD (Organisation for Economic Co-operation and Development) is the importance given to international collaboration as a vehicle for ensuring sustainable growth. Since 2008 a number of multi-stakeholder partnership initiatives have been established to help implement the pledges made by the G20 (improving food and nutrition security; boosting agricultural productivity; and fostering innovation and technological development). Of note is the recent joining of forces by the OECD and FAO in 'The Agriculture Outlook 2014–2023' initiative – to bring together the commodity, policy, and country expertise to provide an annual assessment of national, regional and global agricultural commodity markets.

A further and related thread is the growing global commitment towards building collaborative opportunities in innovation and science, including the development of global research infrastructure. This includes the establishment of scientific networks such as the OECD's 'Global Science Forum' to provide an avenue to maximise international cooperation in scientific research.

While the main focus has been on growth as a way to strengthen the global economy and ensure food security, the 'sustainability' component has not been forgotten. At the Rio+20 Conference in 2012 Member States noted the progress towards achieving the Millennium Sustainable Development Goals (SDGs) in 2015 and initiated the Post-2015 Development Agenda. The Agenda aims to build a coalition for change for/in specific themes, including environmental sustainability and the identification of new opportunities to eradicate poverty and enhance human development. One noted opportunity for aligning economic growth and resilience with environmental sustainability is the emerging concept of the Green Economy or Green Growth.

The wide-scale adoption of green growth principles has resulted in a rapid expansion of the literature on the green economy from a variety of international organisations, national governments, think tanks, experts, and non-government organisations. Since the Rio+20 Conference, the UN has established a number of collaborative initiatives that include the *Partnership for Action on Green Economy (2013–2020)*, *Green Growth Knowledge Platform (GGKP)*, and the *Green Economy Joint Programme (JP)*. These initiatives allow practice in integrating green growth into national economic and social strategies and ensuring commitment to global green growth objectives.

3.2 Policy directions in agriculture and key themes

A review of agricultural policy directions, particularly those in the KBBE partner regions but also at a global scale, highlights the following themes (accounting for differing terminologies to represent the same concept):

- Increased productivity & food security
- Agriculture innovation & technological development
- Sustainability, resource efficiency & resilience

Further information is provided in Table 1 below.

Many of the agricultural policies and strategies, including the most recent *World Bank Agriculture Action Plan* and EU's *Horizon 2020*, highlight the potential of innovative tools to improve environmental and economic performance across the agricultural supply chain, with noted enablers such as *increasing rural capacity, improved knowledge transfer and adoption, and underpinning information data infrastructure*.

Among the KBBE partners, increased partnerships with industry are also a common feature. Horizon 2020 for example, aims to build partnerships between the private and public sector and exchange knowledge and research across the EU and around the globe. Canada's 'Growing Forward 2' ensures Canadian producers and processors have access to tools and resources needed to innovate and capitalize on emerging market opportunities. Australia's National Research Flagships are also aligned to support growth for industries, including the establishment of the Australian Partnerships Programme, which provides investment to high potential, technology-receptive small and medium enterprises. Finally, in New Zealand the government's 'Business Growth Agenda', 'New Zealand's economy: Sector Reports Series', and the proposed National Science Challenge 'Our Land and Water' all emphasise the importance of industry partnership and provide specific mechanisms (e.g. tax incentives) to encourage innovation.

Table 1 Summary of key agricultural policy directions

	Source	Key directions & enablers	Cross-cutting Themes
Global	<ul style="list-style-type: none"> • OECD – Action Plan on Food Price Volatility • WEF – A New Vision for Agriculture • CFAR –Transforming Agriculture Research • SDSN – Solutions for Sustainable Agriculture • WB – Agriculture Action Plan 	<ul style="list-style-type: none"> • Increase rural capacity • Facilitate uptake & adoption • Provide information and data infrastructure 	<ul style="list-style-type: none"> • Global Food Security • Strengthen value chains • Reduce risk and vulnerability • Increased productivity • Enhance environmental services • Social well-being
KBBE Partners	<ul style="list-style-type: none"> • NZ – Our Land & Water, NSC • EU – Societal Challenges, Horizons 2020 • AU – Sustainable Agriculture Flagship, NRF • CA – Growing Forward 2, Agri-Food • AU – RD&E Framework, Dept. Ag 	<ul style="list-style-type: none"> • Build market competitiveness • Develop innovative solutions • Exchange knowledge 	<ul style="list-style-type: none"> • Global Food Security • Economic growth • Increased productivity • Sustainable management • Social well-being

3.3 Collaborative initiatives and networks

As highlighted in Section 3.1, over the last 5 years there has been a growing trend in the establishment of international networks to support multilateral partnerships, multidisciplinary research, cross-sector knowledge exchange, and strategic policy development.

Multilateral collaboration activities commonly function as working groups under global initiatives such as with the Global Science Forum (GSF), the Standing Committee on Agriculture Research (SCAR) and the European Innovation Partnership – Agri (EIP-Agri) and/or as regional partnerships (Global Soils Partnerships (GSP) and Horizons 2020).

Table 2 provides examples across a range of network categories. During the review these initiatives were filtered and prioritised by the themes identified in Section 3.2.

Table 2 Review of key collaborative initiatives and networks (see Appendix 1 for complete review)

Network Category	Initiative	Theme(s)	Description	Collaboration Activities
1. Multilateral Partnerships	<i>Global Soils Partnership</i>	Sustainability, resource efficiency & resilience (soils focused)	Increased awareness of the importance of soils	Regional partnerships, global data portal
	<i>Global Science Forum</i>	Agriculture innovation & technological development	Maximize opportunities for international co-operation in scientific research	Science working groups
	<i>Sustainable Development Solutions Network</i>	Sustainability, resource efficiency & resilience	Mobilizes scientific and technical expertise to address the sustainable development goals	Networks and thematic groups that address the SDGs
	<i>European Innovation Partnership Agri</i>	Increased productivity & food security / Agriculture innovation & technological development	Fosters competitive and sustainable agriculture	Focus groups on agriculture productivity and sustainability
2. Multidisciplinary Research	<i>Global Forum on Agricultural Research</i>	Increased productivity & food security / Agriculture innovation & technological development	Addresses critical issues related to agricultural research for development	Bi-annual global conference on agricultural development
	<i>Cooperative research programmes (OECD)</i>	Increased productivity & food security / Agriculture innovation & technological development	Research programmes on biological resources in agriculture	Fellowships and conference sponsorships in natural resources and sustainability
	<i>Standing Committee on Agriculture Research</i>	Sustainability, resource efficiency & resilience	Align research with the changing environmental and economic conditions	Working groups to stimulate collaborative research
3. Cross-Sector Knowledge Exchange	<i>Institute for Environmental Sustainability</i>	Sustainability, resource efficiency & resilience	Provide scientific and technical support to EU policies	Hosts a large number of global data portals
	<i>Sustainable Agriculture Initiative Platform</i>	Sustainability, resource efficiency & resilience	Gathers and develops knowledge on sustainable agriculture	Multi-stakeholder research and development opportunities for its members

4. Strategic Policy Development	<i>Horizons 2020-Innovation Union</i>	Increased productivity & food security / Agriculture innovation & technological development	Aimed at securing Europe's global competitiveness	Horizons 2020 regional projects
	<i>UN Global Compact</i>	Increased productivity & food security / Agriculture innovation & technological development	Strategic policy initiative to align business towards a sustainable and inclusive economy	Engagement opportunities with the Green Industry platform
	<i>CSIRO National Research Flagships</i>	Increased productivity & food security / Agriculture innovation & technological development	Partnerships to improve productivity and sustainability across the agriculture sector	International collaborative research in sustainable agriculture
	<i>Agriculture Action Plan</i>	Increased productivity & food security / Agriculture innovation & technological development	Support for agriculture and related sectors to make progress toward the SDGs	International research partnerships

4 Opportunities

4.1 Analysis of collaborative initiatives for fit to KBBE

As highlighted in Tables 1 and 2 the KBBE partners share common perspectives and similar agricultural policy drivers, which in turn align with a number of collaborative initiatives and networks focused on the three main themes (*Increased productivity & food security; Agriculture innovation & technological development; and Sustainability, resource efficiency & resilience*) under the broader goal of green growth. Selecting a smaller number of these from which to leverage will be critical, given the resource constraints under which the KBBE partners operate.

An analysis of the strengths, weaknesses, opportunities and threats for the most active and/or aligned of the initiatives (summarised in Tables 1 and 2) was undertaken to identify the best leverage and outcomes for SAT. This is presented in Table 3.

The most aligned opportunities for KBBE SAT are:

- The proposed 'Collaborative Research Network on Sustainable Temperate Agriculture' (CRNSTA) being developing by the Global Science Forum through 2014. The CRNSTA is topically (temperate agriculture), thematically, and aspirationally (designed to enhance collaboration and knowledge exchange) the most aligned to KBBE SAT of all the opportunities. However, since it is still in development there are risks it might suffer from the same barriers that have prevented progress in KBBE SAT.
- Global Forum on Agriculture Research (GFAR) is a multi-national platform supported by the World Bank, World Health Organisation and FAO. GFAR operates through a series of inter-regional partnerships, open forums and hosts the Global Conference on Agricultural Research Development (GCARD). Thematically and aspirationally this is also well-aligned with KBBE SAT, but since the focus is on resource-poor agricultural systems, the developed economies and temperate farming systems more typical in the KBBE partners may be less of a priority, reducing overall fit.
- Horizons 2020, driven out of the European Commission, provides strategic direction and funding for science exchanges and collaborative research projects. While European-centric, the themes, aspirations, and topics align well across the KBBE partners. Participation and access to funding is being increasingly made available for non-European countries. However, focus to date has been on establishing bi-lateral collaboration, e.g. EU and New Zealand, again reducing the possibility of a strong KBBE fit with all partners represented.
- Global Soil Partnership (GSP) is an initiative of the UN FAO. The GSP was established in recognition of the central role of soil resources as a basis for food security and their provision of key ecosystem services. The GSP aims to address the need for international governance and has established a Plenary Assembly bringing together global partners who have jointly developed the World Soil

Charter, the Five Pillars of Action, and the Intergovernmental Technical Panel on Soils (ITPS). KBBE SAT partners from the EU, Australia, and New Zealand are already active in the GSP and ITPS, and are leading some of the key pillars such as soil mapping and modelling. KBBE SAT is therefore already well aligned and could take more guidance from GSP in its activities. While the topical focus is soil, sustainable agriculture is the wider rationale and outcome area for this work.

- Green Growth Knowledge Platform (GGKP) is a global network of international organizations and experts that identifies and addresses major knowledge gaps in green growth theory and practice. The GGKP was established in January 2012 by the Global Green Growth Institute, OECD, the United Nations Environment Programme and the World Bank. This offers a new avenue along which to take KBBE SAT but the current themes (Trade & Competitiveness; Metrics & Indicators; Technology & Innovation; and Fiscal Instruments), while all relevant, may not have a sufficiently strong focus on sustainable agriculture.

Table 3 SWOT of collaborative initiatives with a strong KBBE 'fit'

Collaborative initiative	Primary theme	Strengths	Weaknesses	Opportunities	Threats	Fit
Collaborative Research Network on Sustainable Temperate Agriculture : <ul style="list-style-type: none"> • Network • Membership • Thematic groups 	Sustainability & resource efficiency	Aligned theme with KBBE	Temperate agriculture may exclude parts of Canada as a KBBE partner	New networks and multi-disciplinary working groups	Still in development and may not make progress	Very high
Cooperative research programmes (OECD) : <ul style="list-style-type: none"> • Fellowship • Conference sponsorship 	Increased productivity & food security	Cross-cutting themes	Emphasis on food security, with other streams focusing on sustainability	Builds multi-lateral science relationships.	Limited to fellowships and conferences	Medium
Global Forum on Agriculture Research: <ul style="list-style-type: none"> • Inter-regional partnerships • Open forums • GCARD3 	Sustainability & resource efficiency	Historical working relationship	Emphasis on developing economies and non-temperate agriculture that will face different issues to KBBE partners Regional partnerships are geographically based so would only strengthen bi-lateral relationships between Australia and NZ, and no partnerships exist for Canada	Build on existing partnerships.	KBBE issues not perceived as critical compared with the major contributors in GFAR	High/medium
Global Soil Partnership: <ul style="list-style-type: none"> • International Year of Soil (2015) • Plenary Assembly • Regional Partnership 	Sustainability & resource efficiency	Brings focus onto importance of soils Global collaboration with regional partnerships	Only soils related activities Regional partnerships geographically based so would only strengthen bi-lateral relationships between Australia and NZ	Piggy-back on back of events taking place	Less momentum after 2015	High/medium

Green Growth Knowledge Platform : <ul style="list-style-type: none"> • Projects • Global Green Growth Summit 	Agriculture innovation & technological development	Cross-cutting themes	Emphasis on addressing industry related challenges and may not be as applicable or targeted as agriculture	New networks and multi-disciplinary working groups	Fit may vary across KBBE partners with?	High/medium
Horizons 2020 : <ul style="list-style-type: none"> • Science exchanges • Collaborative research projects • Funding 	Increased productivity & food security	Country partnerships underway	Emphasis on food security, with other streams focusing on sustainability and green growth (e.g. water)	Could increase profile of and investment into KBBE. Is also well-understood by the EU KBBE partners	European-centric Difficult for non-EU KBBE partners to access funding	High / medium
Standing Committee on Agriculture Research - Foresight Process : <ul style="list-style-type: none"> • Working groups • Workshops 	Sustainability & resource efficiency	Historical working relationship	Emphasis on European themes	Foresight 4 underway	European-centric Difficult for non-EU KBBE partners to access funding	Medium
Sustainable Development Solutions Network : <ul style="list-style-type: none"> • Thematic groups • IARU – SC 	Sustainability & resource efficiency	Part of the global agenda	Focuses on developing countries	New networks and multi-disciplinary working groups	Activity could change Post-2015 SDGs review	Medium

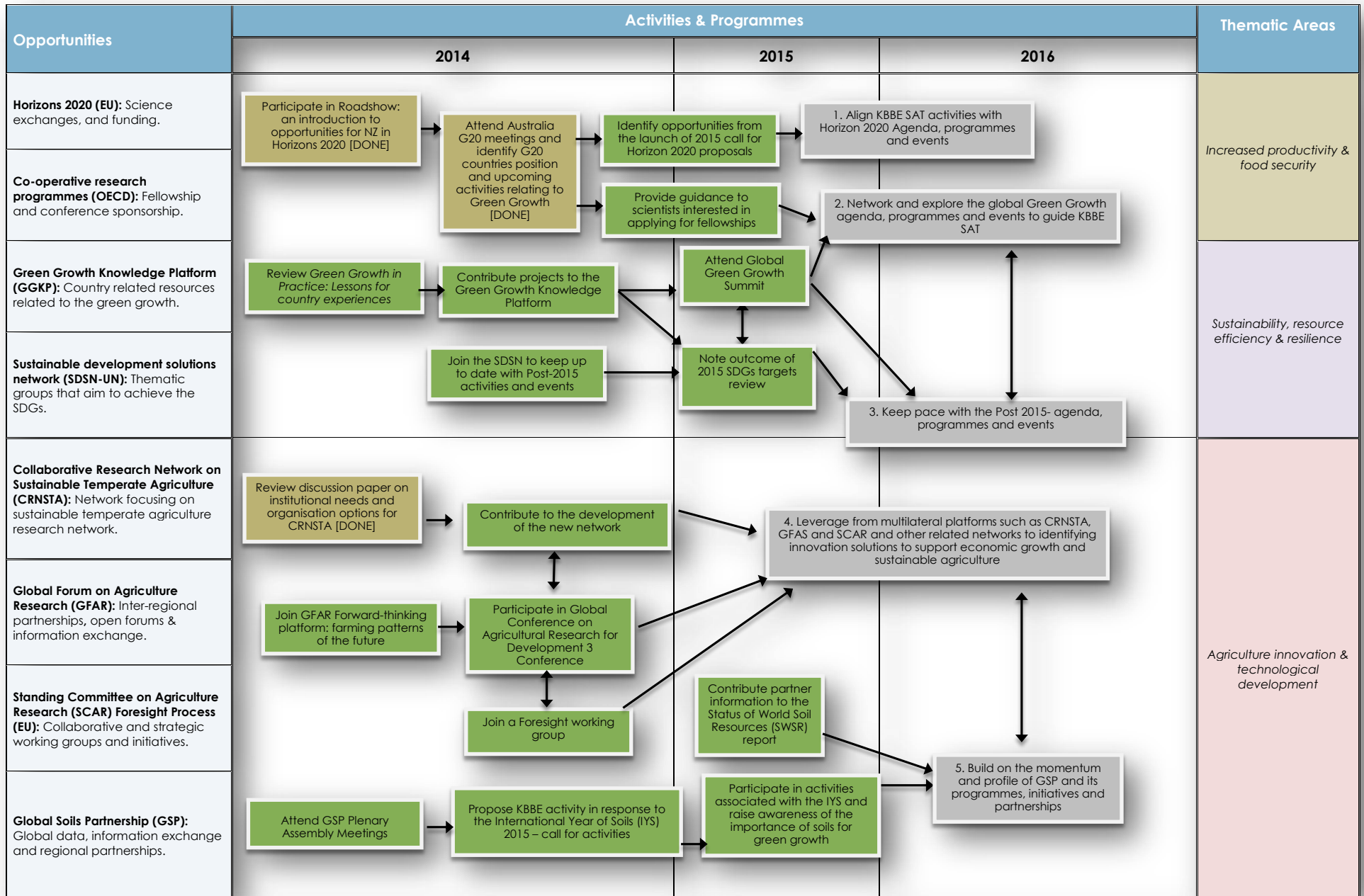
4.2 Analysis of access and alignment activities

Each of the *Collaborative Initiatives* presented in Table 3 was further reviewed to determine key access and alignment opportunities for KBBE SAT and key actions are presented as a Roadmap in Figure 3.

From this analysis five main alignment opportunities appear, each with immediate activities that could facilitate access and alignment for KBBE SAT. These include the following directions, many mutually reinforcing:

- Aligning KBBE SAT activities with the Horizons 2020 Agenda and leveraging from the funding opportunities afforded by Horizons 2020, including science exchanges and collaborative research projects. There is also potential to develop stronger bilateral relationships between individual KBBE partners and the EU through the Horizon 2020 programme of work. More detailed analysis of the opportunities for KBBE SAT in Horizons 2020 could be provided by the current EU member on the KBBE SAT Working Group.
- Networking and exploring the alignment opportunities for KBBE SAT with the growing 'Green Growth Agenda'. This includes participating in and being aware of the G20 commitments (in which the Australians on the KBBE SAT working group have been involved) to green growth, and attending the proposed Green Growth Summit.
- Networking and keeping pace with Post-2015 Sustainable Development Programme. 2015 is a significant year for reviewing the Millennium Sustainable Development Goals and establishing a series of Post-2015 activities, including the Sustainable Development Solutions Network and thematic groups set up to achieve the sustainable development goals resulting from Rio+20.
- Leveraging from multi-lateral platforms in the Sustainable Agriculture domain. This could include participating in the Global Forum on Agriculture 3 Conference '*Agricultural Innovation for the post-2015 development agenda*', in the discussions for the launch of the 4th SCAR Foresight Exercise and helping to shape the proposed *Collaborative Research Network on Sustainable Temperate Agriculture*. As discussed in Section 4.2, CRNSTA is a promising new avenue of collaboration and provides the opportunity for open forms and information exchange.
- Building from the momentum of the Global Soil Partnership and taking advantage of the 2015 International Year of the Soils. There is potential for KBBE SAT to structure its work programme for 2015 to soils to take advantage of the programme being led by the GSP and its high profile in the partner states.

Finally, while not specifically targeted to a thematic area, the OECD Co-operative Research Programme could provide underpinning resources for all five alignment efforts, given the investment it makes available to support fellowship and conference sponsorship.



5 Conclusions and recommendations

5.1 Concluding remarks

As highlighted in Sections 3 and 4, there is significant convergence of thinking both globally and across the KBBE partners, as countries try to recover from the global financial crisis and meet the sustainability goals coming out of Rio+20. The emergence of 'Green Growth' as a conceptual approach for achieving economic and environmental resilience is gaining widespread and global endorsement.

Multilateral vehicles and leading organisations such as the World Economic Forum, World Bank, FAO, the OECD, and the G20 all highlight the potential for sustainable agriculture to contribute towards green growth. These organisations also embody and promote the need for international collaboration to accelerate progress in sustainable agriculture.

2014 is a critical year for forming and cementing key collaborative initiatives reviewed in Section 4.2, while 2015 offers the opportunity to 'ride the coattails' of high profile events and review the Post-2015 Sustainable Development Agenda.

5.2 Reflections and recommendations for the future of KBBE SAT

Progress to date within KBBE SAT has been challenging as the four partners manage both competing pressures for scarce resources and in-country changes in political agendas, research investment, and organizational structure (e.g. Agri-Food Canada). This report identifies significant opportunity for KBBE SAT both to align with collaborations that are already underway and have been endorsed by partners, and to access alternative and/or supplementary resourcing options.

Aligning and accessing these collaborative initiatives may accelerate progress within KBBE SAT or help in the reconfiguration of KBBE more widely. The following recommendations are therefore made to guide future operation of the theme:

- The Green Growth concept is a useful hook on which to align KBBE SAT activities as all four partners look for ways to increase economic growth and resource efficiency and provide greater resilience in their agricultural production systems.
- Sustainable agriculture is a useful cross-cutting theme with a number of facets embedded in it, including: Increased productivity & food security; Agriculture innovation & technological development; and Sustainability, resource efficiency & resilience.
- However, if the KBBE Forum is restructured to focus solely on one of these facets (which may make it easier for targeting alignment) there is a danger the concept of green growth may be lost.
- A number of multi-national and multi-lateral vehicles are already making headway in ensuring collaboration to support sustainable agriculture. If the

KBBE SAT continues there is significant opportunity to realign its direction and activities with these multi-lateral vehicles, using their development to accelerate progress and open up the collaboration beyond the current KBBE partners.

- Well-chosen focus on selected multilateral vehicles that are already delivering tangible benefits and have been endorsed by national governments and funding agencies will likely be an easier 'sell' within the KBBE partner countries, potentially opening up resourcing options.
- The current KBBE SAT working group is well placed to ensure effective access and alignment, given they are already engaged and embedded in many of the activities on the roadmap (noting the lack of involvement from Canada). The working group's review of, and feedback on, this report and the recommendations would be of great value.

5.3 Recommendations for New Zealand and its collaborations

As with the other KBBE partners, the green growth approach offers hope to New Zealand as it wrestles with delivering on the aims of the Business Growth Agenda (productivity, profitability and green credentials) and meeting the demands of the Freshwater Reforms.

The following recommendations are therefore made to guide agencies involved in setting and delivering the sustainable agriculture agenda in New Zealand:

- The results and recommendations of this review are made available to the key agencies that are either involved in KBBE or charged with targeting and promoting international engagement and participation, including the ministries for Primary Industries, the Environment, and Foreign Affairs and Trade.
- The report is also shared with the science community as they prioritise their international participation and collaboration, in particular the leadership team of the proposed '*Our Land and Water*' National Science Challenge and the Crown Research Institutes and universities leading sustainable agriculture research (e.g. AgResearch, Plant & Food Research, Scion, Landcare Research, and Lincoln and Massey universities).
- That continuing focus and support is given to those agencies already engaged in supporting the multi-lateral vehicles highlighted in Sections 4.2 and 4.3, as well as to the bi-lateral relationships that have developed to progress them (e.g. with CSIRO Australia in the progression of Global Soil Partnership).

6 Acknowledgements

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Appendix 1

Initiative	Organization Body	Partners	Cross-cutting Themes	Primary Themes	Start Date	Mechanisms of Collaboration	Initiative Category	Opportunities for KBBE
European Innovation Partnership (EIP-AGRI)	European Commission	EU, Global	improving: competitiveness of farmers, environment and the countryside, quality of life, diversification of rural economy	Food Security, Competitiveness, Innovation	2012	focus groups	Network	Knowledge Exchange, Applied, Network
European Technology Platforms (ETPs)	European Commission	EU, Global	innovation, technology, roadmaps	Innovation	2012	research	Strategy	Technology Development, Knowledge Exchange, Research
Europe 2020	European Commission	EU, Global	smart growth, sustainable growth, inclusive growth	Innovation	2012	research	Strategy	Applied, Pure Research, Technology Development, Knowledge Exchange, Advisory Services, Strategic Support, Business Development, Investment, Network, Capacity Building
Horizons 2020	European Commission	EU, Global	food security, agriculture sustainability, climate change, inland water and bio-economy	Food Security, Sustainability, Innovation	2014	research	Funding	Applied, Pure Research, Technology Development, Knowledge Exchange, Advisory Services, Strategic Support, Business Development, Investment, Network, Capacity Building
Global Soils Partnership	FAO	Global	sustainable management, investment and cooperation, enhance research, improve data quality, harmonize methods	Soils, Sustainability	2011	workshops, meetings, event (World Soils Day)	Network	Knowledge Exchange, Network

Initiative	Organization Body	Partners	Cross-cutting Themes	Primary Themes	Start Date	Mechanisms of Collaboration	Initiative Category	Opportunities for KBBE
FAO Soils Portal	FAO	Global	assessment, management, biodiversity, degradation/restoration, policy	Soils, Sustainability	2009	information/data	Tool	Research
ISRIC	UNESCO	Global	soils		1966	research, data/information, projects	Programme	Applied, Knowledge Exchange
IFAD	UN	Developing Countries	food security, climate change, rural development	Food Security, Sustainability, Rural Development	1977	projects	Funding	Knowledge Exchange, Investment
Global Agriculture and Food Security Programme	World Bank	Developing Countries	food and nutrition security, agriculture productivity	Food Security, Productivity	2009	projects	Funding	Investment
Food and Assets	World Food Programme	Developing Countries	food security and nutrition	Food Security		projects	Programme	Knowledge Exchange, Investment,
CGIAR - Research Programmes	CGIAR	Global	climate change, productivity, environmental footprints, food security, sustainability, nutrition and health, water	Productivity, Food Security, Sustainability, Innovation	1990	research	Network, Funding, Event	Applied
National Soils RD&E Strategy	Dept of Ag - Australia	None	increase productivity, improved management, ecosystem services	Productivity	2014	research	Strategy	Capacity Building, Knowledge Exchange, Research
International Institute for Sustainable Development (IISD) - Canada	UN	Global	resilience in prairie agriculture	Innovation, Sustainability		research	Programme	Knowledge Exchange

Initiative	Organization Body	Partners	Cross-cutting Themes	Primary Themes	Start Date	Mechanisms of Collaboration	Initiative Category	Opportunities for KBBE
New Visions for Agriculture	World Economic Forum	Global	food security	Food Security	2011	focus groups, meetings, workshops	Strategy	Knowledge Exchange
Sustainable Agriculture	OECD	Global	climate change, water, economics of sustainable foods, agro-environmental indicators, environmental performance, policy instruments to support green growth	Sustainability		research, workshops, vent, information/data	Funding, Strategy, Programme	Applied, Pure Research, Technology Development, Knowledge Exchange, Advisory Services, Strategic Support, Business Development, Investment, Network, Capacity Building
Sustainable Resource Management fellowship and conference applications	OECD	Global	natural resource challenge, sustainability in practice, food chain	Sustainability	2015	research	Funding	Capacity Building
SAIP - Sustainable Agriculture Initiative - Australia	SAI – Global	Global	sustainability	Sustainability	2002	workshops, meetings, focus groups	Network	Knowledge Exchange
Agriculture Projects & Programmes	World Bank	Global	productivity, vulnerability, sustainability	Sustainability	2013	projects	Funding	Investment
Sustainable Land Management	World Bank	Global	sustainable land management, food security, soil carbon, climate smart agriculture, verified carbon standard	Sustainability, Food Security	2006	research, projects	Programme	Investment, Knowledge Exchange, Capacity Building, Technological Development
Securing soils for sustainable agriculture: A science led strategy	RSC	UK	soils, food security, agricultural sustainability	Sustainability, Food Security	2011	research	Report	Strategic Support

Initiative	Organization Body	Partners	Cross-cutting Themes	Primary Themes	Start Date	Mechanisms of Collaboration	Initiative Category	Opportunities for KBBE
UN Global Compact	UN	Global	sustainability, food security, improved and water management, technology, improve nutrition	Sustainability, Food security	2012	research	Report	Strategic Support
KBBE	European Commission	NZ, EU, AU and CA	sustainable agriculture, bio-based industrial products, food and health, fisheries and aquaculture	Sustainability	2010	workshops, meetings, scientists exchange, training	Network	Knowledge Exchange, Strategic Support, Network
NZ- Regional Soils Partnership	GSP	Global	soils, sustainable management	Sustainability	2014	projects, meetings	Network	Strategic Support
Standing Agriculture Committee (SCAR)	European Commission	EU	sustainability, bio-economy	Sustainability	2005	research, focus groups, meetings	Programme, Network	Knowledge Exchange
European Initiative for Sustainable Development in Agriculture (EISA)	European Commission	EU	sustainability development, integrated farming	Sustainability	2001	projects	Network	Knowledge Exchange, Strategic Support, Network
Sustainable Agriculture Flagship	CSIRO	AU	productivity, global food security, sustainability, environment, genome	Sustainability, Food Security	2003 and 2014	research	Programme	Pure Research, Capacity Building, Technological Development
Global Science Forum	OECD	Global	international framework, sustainability, infrastructure, policy	Sustainability		meetings, workshops	Network	Knowledge Exchange, Pure Research, Strategic Support
Rio + 20	UN	Global	green economy, sustainable development, poverty eradication	Sustainability	2012	meetings, workshops	Strategy, Network	Knowledge Exchange, Strategic Support, Network

Initiative	Organization Body	Partners	Cross-cutting Themes	Primary Themes	Start Date	Mechanisms of Collaboration	Initiative Category	Opportunities for KBBE
GEO5	UNEP	Global	climate change, ecosystem management, resource efficiency, sustainable consumption, green economy	Sustainability	2012	meetings, reports	Network	Knowledge Exchange, Strategic Support, Network, Capacity Building
Australia G20	G20	Global	employment, infrastructure, development, productive economy, economic growth	Sustainability	2014	meetings, workshops	Event	Knowledge Exchange, Strategic Support, Network
Sustainable Development Systems Network	UN	Global	economic development, social inclusion, environmental sustainability	Sustainability	2013	meetings, workshops, research	Network	Network
Post 2015 Development Agenda	UN	Global	economic development, social inclusion, environmental sustainability	Sustainability	2012	meetings, workshops, research	Network	Network
Growing Forward 2	Government of Canada	Canada	innovation, technology, capability	Innovation, Competitiveness	2013	research, projects, training, scientist exchange, information/data	Funding, Strategy, Programme	Applied, Pure Research, Technology Development, Knowledge Exchange, Advisory Services, Strategic Support, Business Development, Investment, Network, Capacity Building
Green Growth Knowledge Platform	UN	Global	green economy, sustainable development, poverty eradication	Sustainable Growth, Innovation	2012	research, projects	Programme	Pure Research, Knowledge Exchange, Strategic Support, Network