Australian Sustainable Finance Roadmap:

A plan for aligning Australia's financial system with a sustainable, resilient and prosperous future for all Australians

Australian Sustainable Finance Initiative

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Disclaimer

This report reflects the collective output of the Australian Sustainable Finance Initiative (ASFI) and its participants and does not reflect the views of any one participant or the organisation they represent or are employed by. Participation by these individuals should not be taken as endorsement of the recommendations or report by individual organisations.

ASFI and its participants have at all times been mindful of their obligations under Australian competition law. Further, ASFI, its participants and the organisations they represent or are employed by understand the need to comply with competition law in considering or implementing any recommendations or actions arising out of this report.

Individual ASFI participants may have views different to those represented in this report.

Australian Sustainable Finance Initiative (2020) *Australian Sustainable Finance Roadmap: a plan for aligning Australia's financial system with a sustainable, resilient and prosperous future for all Australians*, November 2020, RIAA, Melbourne.

Acknowledgement of Country

The Australian Sustainable Finance Initiative acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing connection to land, waters, species and culture. We acknowledge their ongoing status as the First Peoples of Australia and pay our respects to their Ancestors and Elders past, present and emerging.

Statement from ASFI Co-chairs

Australia's financial system participants have come together in an unprecedented coalition through the Australian Sustainable Finance Initiative to map out a transformation of the country's financial system to one that prioritises prosperity for all, better meets 21st century sustainability challenges, and positions Australia more competitively within international markets.

For Australia to thrive and prosper in the decade ahead and beyond, we need to recover from the recent natural catastrophes of bushfire, drought and flood and the impact of the global Covid-19 pandemic, and prepare ourselves for additional challenges we may face in the future.

Through the work of ASFI, financial system participants acknowledge the critical role we need to play to ensure the financial system is aligned to supporting economic and social recovery, and enabling a future where all Australians can thrive.

This year has reminded us of the important role our financial system plays to support the daily lives of all Australians – the insurance that provides financial protection when our homes are impacted by weather events, the lending that supports our businesses and households though Covid-19, and the investments that provide the capital to build the businesses that create jobs and build the infrastructure for our future Australia.

To prepare for a sustainable future, capital needs to be re-orientated to where it will be needed to support a thriving Australian society, a healthy environment and a strong and prosperous economy.

This means focusing on where capital is lent, what can be insured and where money is invested. The key aim is to support and build value today while strengthening the economic, natural and social assets that underpin our long-term prosperity.

While governments across Australia – federal, state and local – are setting a direction for a stronger and more sustainable nation, this Australian Sustainable Finance Roadmap is the Australian financial system's contribution to ensuring finance is mobilised and connected to a sustainable future where all Australians can feel confident.

Governments are taking action to support investments and jobs for our Covid-19 recovery, and directing investment into critical infrastructure, technologies and manufacturing in a manner consistent with our contribution to international conventions and frameworks, such as the Paris Agreement, Sustainable Development Goals, Sendai Framework, Convention on Biological Diversity and the United Nations Guiding Principles on Business and Human Rights. Australia's financial system recognises these goals simply cannot be achieved without the alignment of finance.

Many of the challenges we face are global in nature and our nation and financial services sector depend on global capital. Beyond our borders a shift is already underway that is shaping the way this capital is flowing around the world, towards cleaner, sustainable assets. There is now an urgent imperative for Australia's financial system to act to remain globally competitive in a world increasingly prioritising sustainable growth for a long-term prosperous economy.

The Australian Sustainable Finance Initiative came together in July 2019 to set the Roadmap for Australia's financial system's contribution to delivering on this national agenda.

We are pleased to present this Australian Sustainable Finance Roadmap that sets out a plan to connect capital to a sustainable and prosperous Australia.

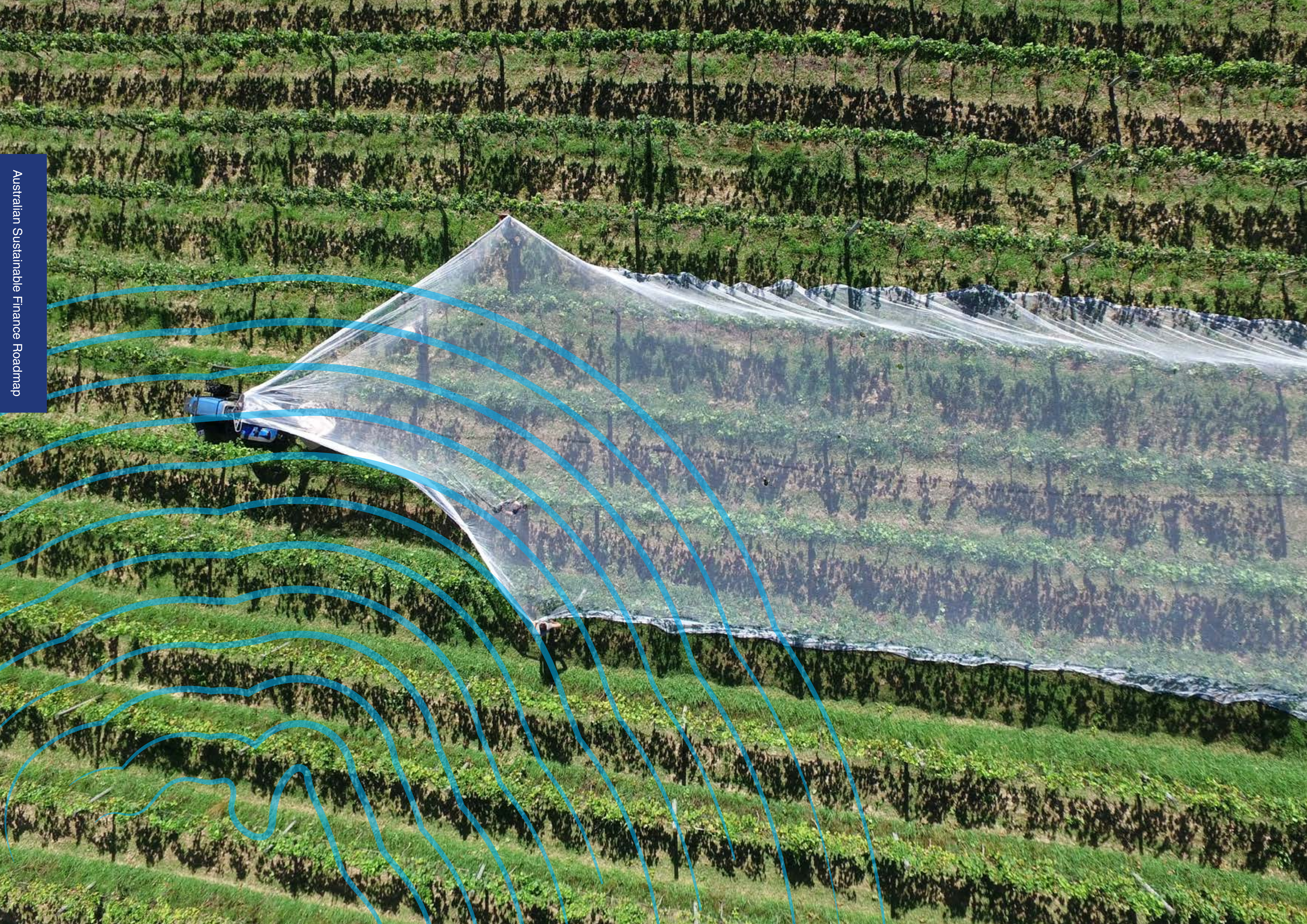
This Roadmap outlines a bold plan to transform Australia's financial system in to one that is better prepared to face future risks and shocks such as a changing climate; can meet the current needs of Australians while delivering on long-term needs for a sustainable future; can enhance the financial inclusion and well-being of all Australians, including our most vulnerable; and can direct capital to where it is most needed in delivering a transition to a net zero, resource-efficient and inclusive economy.

This Roadmap has been a collaborative effort, bringing together more than 140 participants from over 80 organisations across Australia's financial system, including financial institutions, civil society, academia, regulators and government. The Roadmap sets out actions that will be required by all parts of the financial system to set our financial system on a pathway to support a thriving Australian society, a healthy environment, and a strong and prosperous economy.

ASFI worked to bring together a broad coalition in a spirit of collaboration at a critical time. We are committed to continuing this collaboration to ensure the delivery of this Roadmap, working with key stakeholders across the sector and civil society as well as governments and regulators.

As the Co-chairs of this Initiative, we would like to acknowledge and thank the many people and organisations who generously contributed their time and expertise to provide input into this process, including those organisations that made submissions to and consulted with ASFI, and the organisations that provided funding and in-kind support for the process and delivery of the report.

Jacki Johnson and Simon O'Connor
Co-Chairs, ASFI



Executive summary

The Australian Sustainable Finance Roadmap (Roadmap) is a plan for aligning Australia's financial system with a sustainable, resilient and prosperous future for all Australians.

Australians need financial security, a resilient environment in which to live, and a system that is fair and provides the opportunity for everyone to thrive and prosper. At the heart of this Roadmap is a recognition of the important role that the financial system can play in building this future. The financial system can be a force for good and prosperity that serves everyone.

The importance of having a resilient environment for all Australians to live in has never been more apparent than now.

Australia suffered from a summer of catastrophic bushfires in 2019/2020, which were followed in quick succession by the onset of the Covid-19 pandemic in early 2020. These back-to-back crises have had significant social, environmental and economic impacts and are a reminder of the interdependency of society with the natural world. For Australia to prosper and be more resilient, there is a need to support each other, to support communities and to support the ecosystem with all of its life forms.

Resilience requires a balance of stability and flexibility. A resilient economy is prepared for systemic shocks and can weather strains. An economy becomes resilient through meeting the needs of society first, through meaningful employment, quality healthcare, vibrant cultures and education for all, and by protecting and acting to restore the natural systems that sustain life.

The financial system has an important role to play in building resilience. The Roadmap sets out a pathway on how to align the financial system with meeting the needs of all Australians, now and into the future.

The Roadmap's vision for Australia is a financial system:

- that is sustainable, resilient and stable, and can manage systemic risks and other shocks and strains;
- that meets both the present and long-term needs of all Australians, the environment and the economy;
- where financial decisions are informed and consider sustainability risks, impacts and opportunities;
- that enhances financial inclusion and well-being, and informed choice; and
- where capital flows support Australia in delivering on sustainable development goals, including facilitating an orderly transition to a net zero emissions, resource-efficient and socially inclusive economy.

Australia's financial system relies on the efforts of many constituents, including governments, regulators, financial institutions, households and businesses.

Australia's financial system is integrated into the global financial system. Australia plays a leading role, contributing to global regulatory bodies that are focused on ensuring the stability of the global financial system. Many financial institutions operate both domestically and globally.

The challenges and threats Australia's financial system is facing, including a warming climate, increasing extreme weather events, biodiversity loss, and a society under economic pressure with rising inequality, mean there is an urgency with which action needs to be taken. The decade to 2030 will be a critical one and therefore the recommendations in the Roadmap contemplate a series of actions for implementation within short (2021–2022), medium (2023–2025) and long-term (2026–2030) timeframes, with all to be implemented by 2030. The Roadmap includes actions that will need to be undertaken to establish or embed the necessary change; some of these actions will need to be undertaken on an ongoing or regular basis. In many cases, steps to enable implementation can and should begin immediately.

Aligning the financial system to support a more resilient, sustainable and prosperous future for all Australians will require commitment by financial system participants to:

1. support Australia to deliver the Sustainable Development Goals (SDGs) and its commitments to the Paris Agreement, Sendai Framework for Disaster Risk Reduction (Sendai Framework) and Convention on Biological Diversity;
2. support the transition of the Australian economy to net zero emissions by 2050;
3. embed sustainability into leadership, purpose, strategy, risk management and practice of financial institutions; and
4. enable the financial system to facilitate change by developing and implementing collaborative practices across the whole of the financial system, including government, regulators, financial institutions, households and communities.

At the heart of transitioning to a sustainable financial system is the need for collaboration by financial system participants.

To effectively drive systemic change, structures are needed to embed collaboration across the financial system. There is a need for deep, constructive, and ongoing partnerships between government (federal, state and local), community and other financial system participants. It is intended that the Australian Sustainable Finance Initiative (ASFI) be established as a permanent body to provide an ongoing mechanism to monitor and report on progress of the implementation of the Roadmap. Acknowledging competition law obligations, ASFI will support financial institutions to deliver on the Roadmap recommendations by bringing together financial system participants and act as a clearing house for the exchange of ideas, knowledge and practices, developing guidance and undertaking special projects.

The Roadmap sets out a suite of practical recommendations, which financial system participants can start to implement immediately.

The recommendations are focused on the whole of the financial system and need to be seen from a holistic perspective. In this context, the whole is greater than the sum of the parts. The 'institutionalisation' of collaboration consistently with legal obligations (including competition law) will be a key enabler to successful implementation of the Roadmap, with collaboration required by all financial system participants, including financial institutions, regulators, government and other stakeholders.

The transition to a sustainable financial system has already begun and will continue over coming decades.

Financial system participants, including state, territory and local governments, have made commitments to achieving net zero emissions by 2050,[1] and financial institutions have made commitments to support the delivery of net zero emissions in their own areas of investing and finance. These commitments have the collective impact of establishing a long-term investment signal on the structural reform of the Australian economy that enables financial system participants to anticipate and plan their own allocation of resources and reinforce their approaches to risk management.

Over the course of the next decade and beyond, hundreds of thousands of employees working within the financial system will play a role in supporting the transition to a sustainable financial system. Driving transition will require Australia's financial system to establish new structures and adapt existing ones. There is an opportunity to deliver improved social, environmental and economic outcomes for Australia, including supporting job creation, more resilient communities, a cleaner, healthier environment, and climate risk mitigation and adaptation.

Aboriginal and Torres Strait Islander peoples

Aboriginal and Torres Strait Islander peoples have cared for Country for thousands of years.

However, the process of colonisation resulted in denial of their human rights to life, self-determination, economic development, territory, natural resources, governance, culture, language and family. Over the years, legislative and policy changes have increased compliance with human rights standards for Indigenous peoples. Australia is a signatory to international human rights covenants, which include obligations in regard to Indigenous peoples. In 2007, Australia also recognised the United Nations (UN) Declaration on the Rights of Indigenous Peoples (UNDRIP).[2] Indigenous Australians have a particular status as First Peoples, distinct from other minorities or special interest groups.

Human rights, such as self-determination[3], free prior and informed consent in matters affecting people, rights to family, language and culture, are particularly important to Indigenous peoples and are specifically recognised in the UNDRIP.

The rights of Indigenous peoples to self-determination and free, prior and informed consent in relation to the control of territories and natural resources, economic development and the practice of culture, are critical to achieving Indigenous peoples' autonomy, economic prosperity, cultural integrity and well-being as First Peoples of Country.

The *2020 Closing the Gap Report* highlighted that, while progress has been made in some areas, there are still significant gaps in targets between Indigenous and non-Indigenous peoples in relation to child mortality rates, school attendance and education outcomes, participation in employment and life expectancy.[4] The 2020 report highlighted the importance of shared decision-making, working in genuine partnership with Indigenous peoples, and the need for investment in Indigenous-led data to inform solutions to address the current inequalities.[5]

Indigenous Australians are over-represented among financially vulnerable Australians.

Research conducted in partnership between the Centre for Social Impact, First Nations Foundation and National Australia bank showed that, in 2018, nearly 50% of Indigenous Australians were experiencing severe or high financial stress and Indigenous Australians had significantly lower levels of access to financial products and services than non-Indigenous Australians, with higher levels of reliance on high-cost and unregulated forms of credit.[6] A study by the Australian Council of Social Service (ACOSS) considering poverty in Australia showed Indigenous people are between two and three times worse off than non-Indigenous people in Australia, with around 30% of Indigenous households in income poverty.[7]

The Australian Sustainable Finance Roadmap focuses specifically on recommendations that aim to: support meaningful engagement between financial system participants and Indigenous peoples; support First Peoples self-determination; and improve financial outcomes for First Peoples.

Developing the Roadmap

The Roadmap represents the collective output of a collaborative effort with ASFI's vision as its goal.

More than 140 participants from over 80 organisations across Australia's financial system, including financial institutions from banking, superannuation, asset management and insurance, regulators and government, together with civil society and academia, came together through ASFI.

The Roadmap was developed through an inclusive and collaborative process, which included contributions from, and consultation with, academia, government, financial institutions, industry bodies, regulators and civil society.

The process was governed by ASFI's Steering Committee, whose 18 members hold senior executive positions in banks, insurance and investment organisations, universities and civil society organisations. UN Environment Programme Finance Initiative (UNEP FI), Australian Prudential Regulation Authority (APRA) and Australian Securities and Investments Commission (ASIC) executives are observers to the ASFI Steering Committee.

ASFI established four technical working groups and a coordinating working group that were focused on different elements of the financial system: mobilising capital; resilience and stability; informed decision-making; and community and consumer expectations. Each working group had up to 20 members who were selected using an expression of interest process. Nineteen individuals from civil society were selected to form a Civil Society Advisory Group and were allocated to a technical working group or the coordinating working group as a member or observer. Members and observers were selected based on their skills and experience with the objective of ensuring that each working group had a balance of sector, gender, age and professional skill sets. The Roadmap represents the collective output of ASFI participants.

ASFI's first phase of work focused on identifying the critical challenges the Roadmap needed to address.

The six critical challenges identified were detailed in ASFI's progress report,[8] published in December 2019, and related to the following six areas (see also Developing an Australian Sustainable Finance Roadmap, page 22):

- Leadership, culture and institutional structures
- Community and consumer interests and expectations
- Frameworks, tools and standards
- Decision-making and valuation
- Unlocking sustainable finance and allocating capital to where it needs to go
- Policy, regulation and supervision.

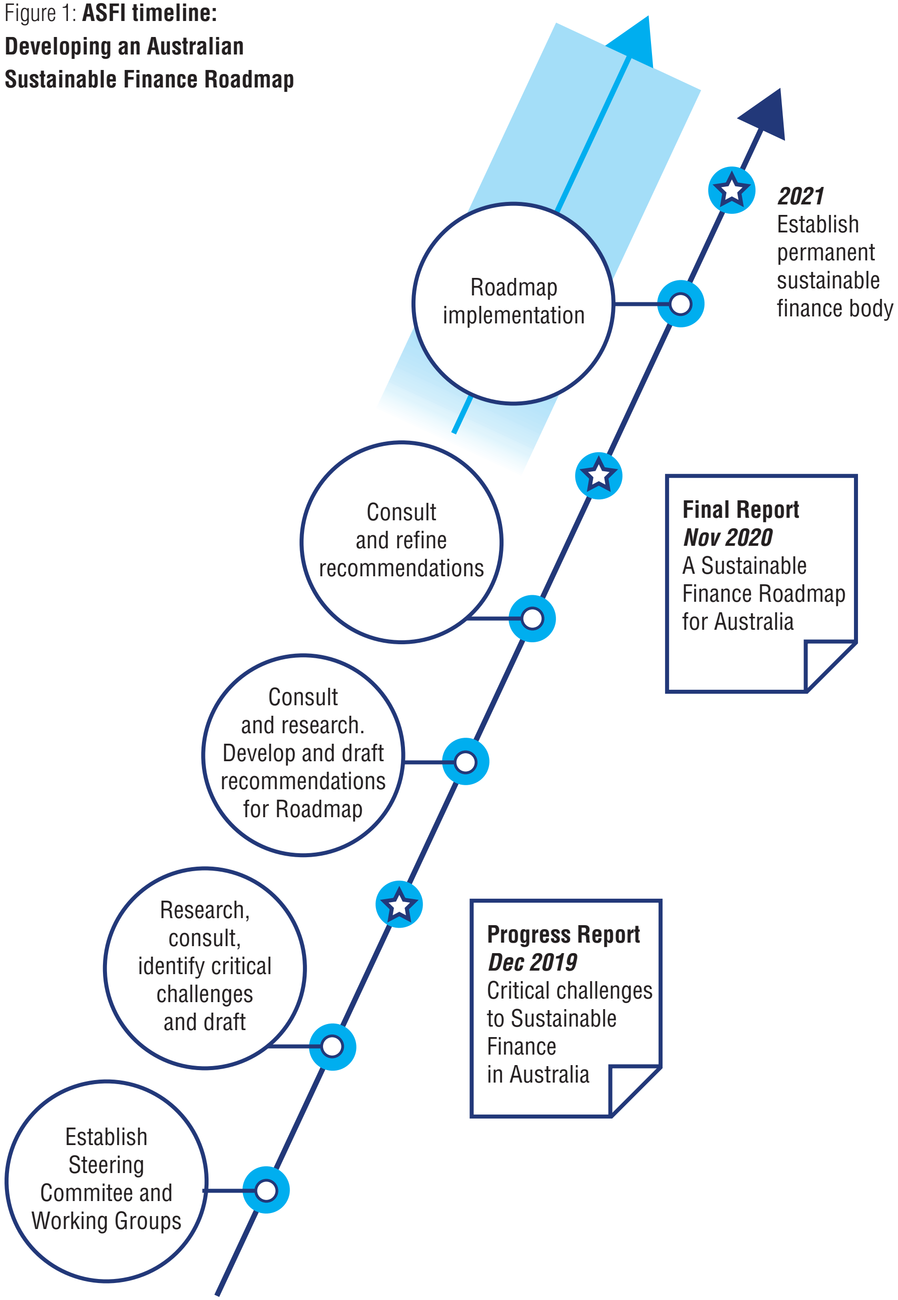
The second phase of work identified recommended solutions to overcome these challenges.

This work was undertaken through a tumultuous period that included bushfires and the Covid-19 pandemic. ASFI's Steering Committee and Working Group members responded dynamically as the impacts of Covid-19 became apparent. A decision was made to defer the release of the Roadmap until November 2020. This has allowed for an explicit consideration of the economic and social impacts of Covid-19, and the accommodation of virtual engagements with key stakeholders and participants.

ASFI's primary focus in developing the Roadmap was on identifying actions that can be taken by financial institutions.

Financial system participants will be at different stages of alignment with the proposed recommendations. The Roadmap does not represent the views of individual organisations, nor is the participation of their employees an organisational endorsement of the recommendations.

Figure 1: **ASFI timeline: Developing an Australian Sustainable Finance Roadmap**



Recommendations

The Roadmap makes a total of 37 recommendations in relation to aligning Australia's financial system with a sustainable, resilient and prosperous future for all Australians.

The 37 recommendations are categorised under the following four domains:

1. **Embedding sustainability into leadership**
2. **Integrating sustainability into practice**
3. **Enabling resilience for all Australians**
4. **Building sustainable finance markets**

The Roadmap includes an Action Plan (page 74), which sets out which financial system participants are best placed to lead or enable implementation of these recommendations, and the recommended timeframes within which implementation should be completed: short (2021–2022), medium (2023–2025) and long-term (2026–2030). The Roadmap includes actions that will need to be undertaken once to establish or embed the necessary change, and actions that will need to be undertaken on an ongoing or regular basis. In most cases, steps to enable implementation can and should begin immediately, consistently with legal obligations (including competition law).

Figure 2 provides an overview of the suggested timeframes for implementation of the recommendations, noting several recommendations will require ongoing implementation beyond the timeframes indicated.

Figure 2: **Australian Sustainable Finance Roadmap – Suggested timeframes for implementation of the recommendations***

	2022	2025	2030
1. Embedding sustainability into leadership	1. Accountability for sustainability led from top 3. Support employee codes 5. Establish permanent ASFI 6. Establish a First Peoples Financial Services Office 7. Work to codify free, prior and informed consent	1. Manage and measure impact on others 2. Build skills and capabilities 3. Build inclusive cultures 4. Align remuneration structures with sustainable long-term value creation and consider embedding sustainability targets 5. Establish special projects and forums to provide guidance on Roadmap implementation 8. Establish International partnerships to support Roadmap implementation	
2. Integrating sustainability into practice	10. Join International Platform on Sustainable Finance 12 & 13. Develop TCFD reporting guidance 14. Play leadership role in development of TNFD 16. Create stress-testing framework and develop guidance 19. Embed sustainability into regulatory guidance and standards 20. Embed sustainability into outsourcing and procurement	9. Establish Taxonomy project 11. Financial institutions report according to TCFD on 'if not, why not' basis 12. ASX 300 report according to TCFD on 'if not, why not' basis 14. Fund research and develop TNFD guidance 15. Mandate sustainability reporting and align with international developments 16. Undertake scenario analysis and stress testing for climate risk 17. Expand vulnerability assessments 18. Value environmental and social externalities 19. Embed sustainability information into products and services 20. Develop stewardship codes	16. Expand scenario analysis and stress tests to include other sustainability risks 18. Facilitate compilation of national- and state-level data sets
3. Enabling resilience for all Australians	24. Establish FIAPs, review current practices and design of products and services 26. Build financial capability 28. Enable financial decisions based on values and sustainability preferences 29. Develop product design principles	22. Support establishment of community finance 23. Develop income and revenue contingent loans 25. Measure and report on: financial distress for households; financial outcomes for Aboriginal and Torres Strait Islander peoples 27. Develop labelling standards 30. Develop Australian-focused well-being framework	
4. Building sustainable finance markets	31. Establish targets and trajectories to support net-zero-aligned decisions	34. Promote climate risk mitigation efforts and ensure buildings are disaster resilient 35. Support development of sustainability impact and resilience markets 37. Finance development and regeneration of real assets (infrastructure and property) 32. Support development of a sustainable capital market 33. Report on functioning of sustainable finance markets 36. Support the formation of Social Impact Investment wholesaler	

The numbers within the table refer to the Roadmap recommendation number

Key for timeframes

Short-term 2021–2022

Medium-term 2023–2025

Long-term 2026–2030

The Australian Sustainable Finance Roadmap recommends:

Embedding sustainability into leadership

Recommendation 1

Accountability for sustainability is led from the top of financial institutions. This will be most successful when sustainability is integrated into purpose, corporate strategy, risk management frameworks, remuneration structures and organisational culture.

Financial institutions manage and measure the impact of their activities on others.

Recommendation 2

Australia's financial system participants collectively build the skills and capabilities that will be necessary for Australia's financial system to support a sustainable, resilient and prosperous future for all Australians by:

- working with existing industry training organisations to deliver new skills and training in sustainable finance across all levels of an organisation;
- supporting the establishment of university-hosted centres for sustainable finance;
- working with the Australian university sector to ensure that core curriculum for all finance and related discipline degrees includes sustainability; and
- developing strategic skills partnerships with experts outside of financial institutions to build mutual understanding.

Recommendation 3

Financial institutions build inclusive corporate cultures that facilitate and promote the ability of employees to speak up, and strengthen personal professionalism through proactive support of industry-funded employee codes.

Recommendation 4

Recognising the strong link between strategy, remuneration, risk and performance, financial institutions:

- align remuneration structures with sustainable long-term value creation; and
- consider embedding sustainability targets into remuneration and incentive practices, and rewarding for sustainability performance and leadership, for example through promotion decisions.

Recommendation 5

The Australian Sustainable Finance Initiative (ASFI) is established as a permanent body that supports Australia's financial system to deliver a sustainable, resilient and prosperous future for all Australians. ASFI would be governed by a Board composed of representatives of financial institutions, with an Advisory Council composed of government, regulators, industry bodies and civil society representatives contributing perspectives and providing advice to the Board on workplan priorities.

Based on the model of the Australian Government's Council of Financial Regulators, the ASFI Advisory Council would convene on a regular basis with state and federal government departments, with the objective of ensuring the work of ASFI is informed by government and societal priorities.

ASFI would undertake a phased program of work to coordinate and facilitate collaboration on implementation of the Roadmap. This would include delivery of an annual statement on the financial system's collective progress in implementing the Roadmap's recommendations, and reporting on the development of partnerships with federal, state and local governments.

As a mechanism to provide guidance on implementation, ASFI would establish special projects and forums consistently with legal obligations of all participants (including competition laws). It is recommended that four forums are established:

1. Financial Risk and Sustainable Practices Forum
2. Sustainable Finance Markets Forum
3. Leadership Forum
4. Australian Sustainable Financial System Forum

All ASFI forums would specifically consider Australia's role in the Asia-Pacific region with respect to sustainable finance.

A key principle in determining whether ASFI would take on a specific project would be whether it has implications across the whole of Australia's financial system. Priority special projects would:

- explore the implementation of a sustainable finance taxonomy in Australia;
- establish interim science-based targets and trajectories that would support individual financial institutions to make net-zero-aligned decisions on lending, insurance and investment;
- develop best practice principles to guide product design, delivery and disclosure to drive sustainable and community-focused outcomes;

- work with the Climate Measurement Standards Initiative (CMSI) and other stakeholders to develop guidance for financial institutions to support reporting according to the Task Force on Climate-related Financial Disclosures (TCFD) recommendations; and
- develop guidance for nature-related financial disclosures aligned to Australia's biodiversity challenges.

ASFI would also establish a First Peoples Financial Services Office led by an Aboriginal or Torres Strait Islander person (see Recommendation 6 below).

Recommendation 6

Australia's financial system participants establish, through ASFI, a First Peoples Financial Services Office. This Office would be led by an Aboriginal or Torres Strait Islander person to:

- facilitate financial system participants' engagement with their communities and organisations on a range of issues related to the inclusive design and delivery of financial services;
- build genuine partnerships;
- encourage more accessible banking and superannuation services, suitable insurance products and disclosure processes; and
- demonstrate respect for the rights of Indigenous peoples in the due diligence processes by investors.

Recommendation 7

In recognition of Aboriginal and Torres Strait Islander peoples' rights to self-determination, financial institutions work to codify the principle of free, prior and informed consent in decisions made by financial institutions. This would include:

- providing finance where there has been consultation and cooperation in good faith with any Indigenous peoples concerned through their own representatives and representative institutions in order to apply the principle of free, prior and informed consent, and reconsidering projects or activities where that standard cannot be achieved; and
- when providing finance to Indigenous groups, ensuring decisions align with the principle of free, prior and informed consent.

Recommendation 8

Australia's financial system participants establish international partnerships to support the implementation of the Australian Sustainable Finance Roadmap.

Integrating sustainability into practice

Recommendation 9

Australia's financial system participants establish a key project to explore the implementation of a sustainable finance taxonomy in Australia. The project should involve a broad group of key stakeholders, including civil society, asset owners, asset managers, banks, insurers, financial regulators, legal experts, industry experts, technology experts, sustainability experts, state governments, and the Australian Government.

Recommendation 10

Australia, through a relevant public authority, joins the International Platform on Sustainable Finance (IPSF) to enhance coordination and alignment with international sustainable finance initiatives, and to promote best practice in sustainable finance.

Recommendation 11

Financial institutions with annual consolidated revenue of more than $100 million report according to the TCFD recommendations by 2023 on an 'if not, why not' basis.

Recommendation 12

All Australian Securities Exchange (ASX) listed companies, beginning with the ASX 300, report according to the TCFD recommendations by 2023 on an 'if not, why not' basis, and guidance is developed for ASX-listed entities to support TCFD-aligned reporting.

Recommendation 13

ASFI, together with CMSI and other stakeholders, develops guidance to support TCFD-aligned reporting by financial institutions and facilitates discussion on how these reporting practices can be developed and implemented.

Recommendation 14

Recognising that between 7 and 10 per cent of all species on Earth occur in Australia,[9] and many of these are only found in Australia,[10] Australia's financial system participants collectively play a leadership role in the development of the Task Force on Nature-related Financial Disclosures (TNFD) by:

- funding research that supports TNFD's working groups;
- engaging in the process to develop the TNFD reporting framework; and
- establishing, through ASFI, an Australian project to develop guidance for nature-related financial disclosures aligned to Australia's biodiversity challenges.

Recommendation 15
Sustainability reporting and assurance is mandated for listed entities and for unlisted assets wholly owned by financial institutions.

Australia's financial system participants, including financial institutions, businesses, governments and regulators, work to align with international developments, noting the evolving discussions around convergence of global disclosure frameworks, and in particular the commitment by CDP, Climate Disclosure Standards Board (CDSB), Global Reporting Initiative (GRI), International Integrated Reporting Council (IIRC) and Sustainability Accounting Standards Board (SASB) to work together towards Comprehensive Corporate Reporting.

Recommendation 16
Financial institutions undertake scenario analysis and stress test the resilience of their organisation to physical and transition risks from climate change.

To support this, the industry creates a bottom up, industry-led stress-testing framework that includes processes, frameworks, data and tools sufficient for an organisation to stress test its business. This would include information about what organisations are expected to report against and access to generic data and tools for stress testing, including from the Bureau of Meteorology and CSIRO, and environmental data held by government departments. This work should build on CMSI's current work to develop physical climate risk stress tests, which could fall into this category.

Over time, scenario analysis and stress tests are expanded to include other sustainability-related impacts, for example, biodiversity loss.

Guidance should be developed on best practice approaches to conducting stress tests that is relevant for financial institutions of different sizes. Once established, ASFI's Financial Risk and Sustainable Practices Forum would provide a mechanism for discussion on the development and implementation of stress-testing practices as well as scenario analysis and climate modelling.

Recommendation 17
Vulnerability assessments to be undertaken or planned by APRA are expanded to include fit-for-purpose assessments for small and medium financial institutions across Australia, as well as the superannuation and insurance sectors.

Recommendation 18
Environmental and social externalities are valued by financial institutions. To support this, Australia's financial system participants help to compile national- and state-level data sets by developing general principles and guidance to allow financial system participants to measure and assess multiple capitals including soil, water, education levels and gender diversity. Guidance would address how common metrics can be integrated into investment decisions and risk analysis, including, for example, determining impacts and dependencies, and materiality.

Recommendation 19
Financial institutions work with Australia's financial system regulators on an ongoing basis to embed sustainability into regulatory guidance and standards to drive system-wide practice. ASFI's Financial Risk and Sustainable Practices Forum provides a mechanism for collaboration between financial regulators, financial institutions and stakeholders.

Recommendation 20
Australia's financial system participants positively drive best practice for the benefit of the whole of the Australian economy and society, including by:

- embedding sustainability into outsourcing and procurement practices; and
- embedding sustainability information into products and services for households and businesses.

Recommendation 21
Australia's financial system participants develop stewardship codes to harmonise and enhance stewardship practices.

Enabling resilience for all Australians

Recommendation 22
Australia's financial system participants support the establishment of community finance that can be accessed by place-based groups, including clubs and social enterprises, as part of a place-based community resilience strategy. This should include collaborative initiatives with local government partners, development of standardised documentation that can reduce the costs for social enterprises to access finance, and support for credit guarantees and other measures that reduce the risk of financing and investing.

Recommendation 23
Australia's financial system participants develop income and revenue contingent loans as a mechanism to support individual and community resilience to acute shocks as well as chronic threats to climate and health, which amplify the impact of acute shocks on the most vulnerable.

Recommendation 24

Financial institutions establish Financial Inclusions Action Plans and review current practices and design of products and services to ensure financial inclusion.

Recommendation 25

Consistent with applicable laws and regulations, financial institutions measure and report on:

- financial distress for households to bring greater focus on individual impact and measures being taken by the institution to address financial vulnerability; and
- financial outcomes for Aboriginal and Torres Strait Islander customers. This would involve working in partnership with Indigenous peoples on the approach to measurement and evaluation of outcomes for Indigenous customers. The tools used to collect relevant data should be culturally appropriate.

Recommendation 26

Financial institutions collaborate with regulators and the Australian Government to support networks, programs and initiatives that build individual and community financial capability.

Recommendation 27

Australia's financial system participants support the development of labelling standards that provide consumers with access to consistent labelling and disclosure of the sustainability of financial services products to provide clarity to consumers on the quality of products, and how sustainability is considered and managed within these products. The development of labelling standards should link to the implementation of a sustainability classification system (taxonomy).

Recommendation 28

Australia's financial system participants enable Australians to make financial decisions based on their values and sustainability preferences. This includes:

- ensuring financial advisers (human and robot), superannuation funds, accountants and platforms consider the sustainability preferences of consumers. The client fact-find process should be conducted in a way that is simple for consumers to understand and include a standard set of sustainability preference questions;
- for ASIC to consider strengthening its Regulatory Guide 65 to facilitate meaningful disclosures on the extent to which product issuers disclose whether and how labour standards, environmental, social or ethical considerations are taken into account for investment products;
- for trustees of registrable superannuation entities and responsible entities of other publicly available funds to voluntarily disclose their portfolio holdings within 90 days of each half year;
- for financial institutions to collaborate and develop best practice guidelines for the disclosure of portfolio holdings by superannuation entities and other publicly available funds (in the absence of regulations being passed by the Australian Parliament); and
- for the Australian Parliament to pass regulations to prescribe the content and format of disclosure of portfolio holdings by superannuation entities.

Recommendation 29

Australia's financial system participants collaborate, through ASFI, to develop best practice principles to guide product design, delivery and disclosure to drive sustainable and community-focused outcomes.

Recommendation 30

Australia's financial system participants support the development and implementation of an Australian-focused well-being framework, informed by global thinking and based on New Zealand's 12 domains of well-being in its Living Standards Framework.

Building sustainable finance markets

Recommendation 31

Australia's financial institutions collaborate, through ASFI, to establish interim science-based targets and trajectories to align and facilitate the transition to net zero emissions by 2050. This will support individual financial institutions to make net-zero-aligned decisions on lending, insurance and investment.

Recommendation 32

Australia's financial system participants work collaboratively to support development of a sustainable capital market by:

- working with financial system regulators to develop guidance for financial institutions on treatment of green and resilience or sustainable assets related to risk weightings and capital treatment of such assets;
- removing roadblocks to commercialising impactful technologies and developing investment models that align with liquidity requirements of financial system participants;
- working with financial system regulators to develop guidance on sustainable benchmarks and indices;
- supporting sustainability-focused businesses across the Asia-Pacific region to raise capital and issue bonds through Australia's capital markets; and
- supporting sustainability-focused businesses in the Asia-Pacific to list on ASX or other Australian stock exchanges, including clean technology businesses that deliver products and services throughout this region.

Recommendation 33
Australia's financial system participants produce a regular report that considers whether Australia's sustainable finance markets are functioning efficiently to support the delivery of net zero emissions by 2050, consistent with science-based targets.

The report would provide advice to regulators, government and financial market participants on measures that could be introduced to enhance the efficient functioning of capital markets. A key area for consideration would be whether intermediaries are supplying, and financial system participants are demanding, services that support implementation. Areas of focus of a report would include the availability and appropriateness of market benchmarks and indices that align with net zero targets, impediments to investment such as market liquidity, and diversity of investment opportunities.

Recommendation 34
Australia's financial system participants work collaboratively to promote climate risk mitigation efforts and to ensure buildings are disaster resilient by:

- implementing a framework for assessing the cost of mitigation investment that factors in the broader social costs and benefits;
- supporting, through credit guarantees and other measures, banks/lenders to lend for mitigation retrofits through issuance of resilience bonds; and
- supporting household-level risk mitigation for owners and renters through education and incentives for those who cannot afford to implement retrofitting.

Recommendation 35
Australia's financial system participants work collaboratively to support development of sustainability impact and resilience markets including natural capital, carbon, impact investment, and climate mitigation and adaptation, with a focus on:

- building market architecture through the establishment of common platforms for information disclosure, trading and intermediary services, with strong governance rules and enforcement;
- development of standardised documentation to reduce transaction costs, and support for credit guarantees and other measures that reduce the risk of financing and investing; and
- developing social enterprises and impact investments that focus on Asia-Pacific countries.

Recommendation 36
Australia's financial system participants back initiatives to catalyse the establishment of sustainability impact and resilience markets by supporting the formation of an independent Social Impact Investment wholesaler for Australia.

Recommendation 37
Australia's financial system participants finance the development and regeneration of real assets, including infrastructure and property (housing, industrial and commercial), through:

- aligning Australia's Infrastructure Priority List produced by Infrastructure Australia with the objective of achieving net zero emissions by 2050;
- efficient and streamlined regulatory requirements for investment into essential assets, including energy network, transport concessions and social infrastructure, with the aim of substantially reducing the time/cost/effort involved to invest and finance critical infrastructure;
- working with the Australian Energy Market Operator (AEMO), Australian Energy Market Commission (AEMC), Australian Energy Regulator (AER), Energy Security Board (ESB) and COAG Energy Council to expedite an actionable Integrated System Plan with the objective of unlocking critical investment into transmission, interconnection, renewables and distribution;
- developing infrastructure investment across the Asia-Pacific region that is focused on delivering social and environmental outcomes;
- integrating environmental, social and governance (ESG) factors into the investment decision-making process for new infrastructure projects, and for expansions to existing assets, using broadly accepted standards and frameworks relevant to the specific category of infrastructure assets, such as GRESB's Infrastructure Asset Assessment, Infrastructure Sustainability Council of Australia's (ISCA) Infrastructure Sustainability rating and the Green Building Council of Australia's Green Star Rating System;
- using a national rating scheme for the energy performance of homes such as the Nationwide House Energy Rating Scheme (NatHERS) and establishing mandatory disclosure of performance at the point of sale and lease;
- supporting an industry approach to adopt the three major rating tools (National Australian Built Environment Rating System (NABERS), Green Star and ISCA's Infrastructure Sustainability rating scheme) as measurement benchmarks, provided they implement a net zero emissions pathway consistent with a 1.5°C trajectory across operational and embodied carbon, and minimum standards for new and existing assets to become more climate change resilient and socially responsible;
- integrating built environment ratings into consumer and business lending and investment valuations, including infrastructure projects; and
- working with stakeholders, including the construction sector, to update the National Construction Code so that future residential properties are built to be resilient to climate change and broader climate and geological risks, and ensure energy efficiency as well as use of sustainable materials.

1. Sustainable financial systems

In order to address the cascading climate, biodiversity, social and economic crises, sustainability needs to be embedded into the operations and functions of Australia's financial system. In considering the role sustainability plays in Australia's financial system, the definition of sustainable development adopted by the World Commission on Environment and Development and published in 1987 is used.[11] Sustainability can be defined as focusing on meeting the needs of the present without compromising the ability of future generations to meet their needs.

There is considerable global focus on defining the elements of a sustainable financial system. UN Environment and the World Bank's *Roadmap for a Sustainable Financial System*,[12] released in November 2017, offers the following definition:

> *A sustainable financial system is stable and creates, values, and transacts financial assets in ways that shape real wealth to serve the long-term needs of a sustainable and inclusive economy along all dimensions relevant to achieving those needs, including economic, social, and environmental issues; sustainable employment; education; retirement financing; technological innovation; resilient infrastructure construction; and climate change mitigation and adaptation.*

A sustainable financial system is influenced by international agreements to which Australia is a signatory. Australia is a signatory to four international agreements that have explicit implications for the development of an Australian Sustainable Finance Roadmap: the Sustainable Development Goals (SDGs), the Paris Agreement, the Sendai Framework and the Convention on Biological Diversity. Through these global agreements, nations acknowledge that provision of capital, lending to businesses and households and insuring assets are critical activities, and indeed an essential role for finance to play to enable agreements to be delivered.

The SDGs, adopted by resolution (70/1) of the UN General Assembly on 25 September 2015, represent 17 goals with 169 targets that, in sum, frame the challenges countries, including Australia, must address to deliver on important social and environmental objectives. The goals state "national development efforts need to be supported by an enabling international economic environment, including coherent and mutually supporting world trade, monetary and financial systems, and strengthened and enhanced global economic governance" (Clause 63).

The Paris Agreement, adopted at the 21st session of the Conference of the Parties of the UN Framework Convention on Climate Change on 12 December 2015, establishes a global response to climate change with the objective to maintain an average global temperature rise below 2 degrees Celsius this century, and to pursue efforts to limit rises to 1.5°C. The Paris Agreement states "[a]s part of a global effort, developed country Parties should continue to take the lead in mobilising climate finance from a wide variety of sources, instruments and channels, noting the significant role of public funds, through a variety of actions, including supporting country driven strategies, and taking into account the needs and priorities of developing country Parties" (Article 9).

The Sendai Framework for Disaster Risk Reduction 2015–2030, adopted at the Third UN World Conference in Sendai, Japan, on 18 March 2015, is an agreement to work towards the "substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries". The Framework states that parties agree "to promote the development and strengthening of disaster risk transfer and sharing mechanisms and instruments in close cooperation with partners in the international community, business, international financial institutions and other relevant stakeholders", and further agree "to encourage the coordination between global and regional financial institutions with a view to assessing and anticipating the potential economic and social impacts of disasters" (Clause 31).

The Convention on Biological Diversity, originally established in 1992 at the Rio Earth Summit, explicitly recognises the importance of cooperation between government authorities and the private sector in developing methods for sustainable use of biological resources (Article 10). Article 21 states that governments shall consider strengthening existing financial institutions to provide financial resources for the conservation and sustainable use of biological diversity (Article 21).[13] A new Global Biodiversity Framework[14] that would replace the Aichi Biodiversity Targets with new targets to 2030 is being established. The Zero Draft of the Global Biodiversity Framework[15] proposes long-term goals for 2050 of no net loss by 2030 in the area and integrity of freshwater, marine and terrestrial ecosystems, and increases of at least (20%) by 2050, ensuring ecosystem resilience. Covid-19 has delayed meetings to progress global discussions on the Framework.

The UN Guiding Principles on Business and Human Rights implement the UN 'Protect, Respect and Remedy' Framework, which was endorsed by the Human Rights Council in its resolution 17/4 of 16 June 2011. The framework applies to all States and to all business enterprises, both transnational and others, regardless of their size, sector, location, ownership and structure.[16]

Several other UN agreements specifically mention the role of the private sector and financial institutions. There is value in the UNEP FI providing guidance to financial system participants on navigating UN agreements.

CASE STUDY

Sustainable Development Goals (SDGs)

The UN meets annually through the UN High-level Political Forum on Sustainable Development to review progress on meeting the SDGs.[17]

All of the 193 countries that signed on to the 2030 Agenda for Sustainable Development committed to producing a report on implementation of the SDGs at least twice over the lifetime of the Agenda. Australia delivered its first Voluntary National Review on 17 July 2018.[18] Australia's SDG Review was a 'whole of Australia' report that reflected government initiatives and activity and the efforts of the business sector, civil society, academia, communities and individuals. The Review drew on the activities, engagement and leadership of key civil society, academic and business organisations and their members.

In July 2021, under the auspices of the UN Economic and Social Council, governments will meet under the theme 'Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development: building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development'.

The meeting will discuss in depth SDGs 1: no poverty, 2: zero hunger, 3: good health and well-being, 8: decent work and economic growth, 10: reduced inequalities, 12: responsible consumption and production, 13: climate action, 16: peace, justice and strong institutions, and 17: partnerships for the goals. The meeting will also consider the integrated, indivisible and interlinked nature of the SDGs.

1.1 Sustainable finance roadmaps in other jurisdictions

As part of efforts to meet commitments to international agreements, nations have been working globally to embed sustainability into domestic financial systems.

Sustainability is now incorporated directly into the G20's work on the global financial system with the Green Finance Study Group established under China's G20 Presidency in 2016. This was expanded in 2018 under Argentina's G20 Presidency to become the Sustainable Finance Study Group. Most recently, the G20 established the G20 Infrastructure Working Group under Saudi Arabia's G20 Presidency, developing proposals to improve the investment environment for infrastructure.[19]

Globally, the European Union (EU), and several nations including the United Kingdom (UK), Canada and New Zealand have established processes to build sustainable finance roadmaps for the domestic financial system. These processes are summarised below.

1.1.1 European Union

In September 2016, the European Commission launched a high-level expert group (HLEG) to produce a roadmap for a sustainable financial system. The final report of the HLEG was released in January 2018. The report identified eight areas of priority:

1. To introduce a common sustainable finance taxonomy to ensure market consistency and clarity, starting with climate change.
2. To clarify investor duties to extend time horizons and bring greater focus on ESG factors.
3. To upgrade Europe's disclosure rules to make climate change risks and opportunities fully transparent.
4. To empower and connect Europe's citizens with sustainable finance issues.
5. To develop official European sustainable finance standards, starting with one on green bonds.
6. To establish a 'Sustainable Infrastructure Europe' facility to expand the size and quality of the EU pipeline of sustainable assets.
7. To reform governance and leadership of companies to build sustainable finance competencies.
8. To enlarge the role and capabilities of the European Supervisory Agencies to promote sustainable finance as part of their mandates.

The HLEG subsequently formed the basis of an EU Commission Action Plan adopted by the Commission in March 2018 that focused on five actions:

1. establishing a clear and detailed EU classification system – or taxonomy – for sustainable activities. This will create a common language for all actors in the financial system;
2. establishing EU labels for green financial products. This will help investors to easily identify products that comply with green or low-carbon criteria;
3. introducing measures to clarify asset managers' and institutional investors' duties regarding sustainability;
4. strengthening the transparency of companies on their ESG policies. The Commission will evaluate the current reporting requirements for issuers to make sure they provide the right information to investors; and
5. introducing a 'green supporting factor' in the EU prudential rules for banks and insurance companies. This means incorporating climate risks into banks' risk management policies and supporting financial institutions that contribute to fund sustainable projects.[20]

1.1.2 United Kingdom

In September 2017, the UK Government established an "independent taskforce to accelerate growth of green finance and the UK's low carbon economy," chaired by former Mayor of London, Sir Roger Gifford. The taskforce reported on 28 March 2018, making a series of recommendations on how the government and the private sector can work together to make green finance an integral part of financial services with a focus on:

- boosting investment into innovative clean technologies;
- driving demand and supply for green lending products;
- setting up Clean Growth Regeneration Zones;
- improving climate risk management with advanced data;
- building a green and resilient infrastructure pipeline; and
- issuing a sovereign green bond.

The UK Government published its Green Finance Strategy on 2 July 2019 as its official response to the Taskforce report. The Green Finance Strategy was published in line with publication of the government's Clean Growth Strategy, 25 Year Environment Plan and Industrial Strategy.

A key focus of the UK's Green Finance Strategy was the concept of 'Greening Finance and Financing Green'.

Greening Finance was defined as mainstreaming climate and environmental factors as a financial and strategic imperative by establishing a shared understanding, clarifying roles and responsibilities, fostering transparency and embedding a long-term approach, and building robust and consistent green financial market frameworks. Financing Green was defined as mobilising private finance for clean and resilient growth, establishing robust, long-term policy frameworks, improving access to finance for green investment, addressing market barriers and building capability, and developing innovative approaches and new ways of working.

A clear focus of the UK approach is to crowd in domestic institutional investors, which drives up domestic capital allocation to domestic sustainable assets, an outcome the Roadmap's recommendations seek to facilitate in Australia. The UK has focused on establishing itself as a regional sustainable/green finance hub. In addition to leadership and political/policy benefits, being a regional hub also results in new and additional capital flowing 'through', creating more jobs and economic activity and helps focus on creating the domestic pipeline and investment.

The UK strategy also recognised the importance of natural capital and how if it can be valued and associated outputs applied in financial and non-financial decisions so that new 'assets' will be created, new revenue streams unlocked, new sustainable regional economic activity brought to fruition and consequently additional opportunities created for greater domestic institutional investment.

1.1.3 Canada

The Canadian Government Expert Panel on Sustainable Finance was given a mandate to draft a report to government outlining:

- global trends in sustainable finance, including climate-related risk disclosure;
- roles and responsibilities for sustainable finance in Canada;
- opportunities and challenges relating to sustainable finance and climate-related risk disclosure in Canada; and
- recommendations of potential next steps the Government of Canada may wish to consider within its area of jurisdiction.

The Final Report of the Expert Panel on Sustainable Finance, *Mobilizing Finance for Sustainable Growth*,[21] published in 2019, included a recommendation to "establish a standing Canadian Sustainable Finance Action Council (SFAC), with a cross-departmental secretariat, to advise and assist the federal government in implementing the Panel's recommendations".

1.1.4 New Zealand

The New Zealand Sustainable Finance Forum was established in March 2019 to deliver a Sustainable Finance Roadmap to help New Zealand shift to a financial system that supports sustainable social, environmental and economic well-being. The Forum's final report, a Roadmap for Action, was published in November 2020.

The Roadmap for Action makes a series of recommendations under the following three themes:

- Changing Mindsets – focused on responsibility, capability and governance.
- Transforming the Financial System – focused on data, disclosure, coordination, account and value, inclusiveness and Government leadership.
- Financing Transformation – including resiliency, and standards and pathways.

The Roadmap includes a recommendation to establish an independent Centre for Sustainable Finance that would oversee and coordinate implementation of the Roadmap. The role of the Centre would be to serve as the principal forum for the collaboration between the public and private sectors with respect to sustainable finance.[22]

1.2 Global financial system regulation

Internationally, governments and financial system regulators have focused on building sustainability and resilience into their operational practices that support a sustainable financial system. Recent regulator developments include:

International Organization of Securities Commissions (IOSCO): the peak body for securities regulators (including ASIC) established its Sustainable Finance Network in October 2018.[23] IOSCO recently announced the establishment of a Sustainability Task Force that will focus on improving sustainability-related disclosures made by issuers and asset managers, identifying and developing categories of disclosure which are material for investors and capable of falling within the supervisory and regulatory competence of securities regulators, and assisting IOSCO members to identify and address greenwashing and other investor protection concerns.

International Organisation of Pension Supervisors (IOPS): the peak body of pension fund supervisors (including APRA) recently published supervisory guidelines for the explicit integration of ESG factors in the investment and risk management of pension funds.

International Association of Insurance Supervisors (IAIS) and Sustainable Insurance Forum (SIF): representing insurance supervisors and regulators, IAIS and SIF have come together to release a joint issues paper on climate change risks to the insurance sector. The first paper the SIF launched in 2020 was in collaboration with the IAIS and provided an overview of practices that supervisors have considered in the development of climate-related disclosure requirements within their markets, including a focus on TCFD practices that can be implemented with limited direct regulatory intervention.[24]

Financial Stability Board (FSB): the peak international body to promote international financial stability, has led the development of the TCFD Framework, setting out voluntary disclosure guidance on climate-related financial risks. Australia's Reserve Bank and Treasury are represented on the FSB.

Network for Greening the Financial System (NGFS): network of central banks that is leading a global collaboration to manage "both the opportunities and vulnerabilities for financial institutions and the financial system as a whole" in responding to environmental and climate change challenges. In June 2020, NGFS published a first set of climate scenarios for forward-looking climate risks assessment alongside a user guide and announced an inquiry into the potential impact of climate change on monetary policy.[25]

International Accounting Standards Board / International Financial Reporting Standards (IASB/IFRS): the IFRS Foundation, responsible for the development and publication of IFRS Standards, established a Task Force in October 2019 that is proposing the establishment of a new Sustainability Standards Board under the governance structure of the IFRS Foundation to develop global sustainability standards.[26]

1.3 International sustainable finance collaboration

Australian financial institutions have played an influential role in the development of global initiatives, including the UNEP FI, Principles for Responsible Investment, Principles for Sustainable Insurance and Principles for Responsible Banking.

UNEP FI is a partnership between UNEP and the global financial sector to mobilise private sector finance for sustainable development.[27] UNEP FI supports global finance sector principles to catalyse integration of sustainability into financial market practice. The frameworks UNEP FI has established or co-created include:

- Principles for Responsible Banking: launched in 2019 with more than 130 banks collectively holding US$47 trillion in assets, or one third of the global banking sector.
- Principles for Sustainable Insurance: established in 2012 by UNEP FI and today applied by one-quarter of the world's insurers (25% of world premium).
- Principles for Responsible Investment: established in 2006 by UNEP FI and the UN Global Compact, and now applied by half the world's institutional investors (US$83 trillion).

The UNEP FI Global Steering Committee provides executive direction on strategic, work program and budgetary issues on a regular basis. The Global Steering Committee reports to UNEP FI's Annual General Meeting, where all members come together to make decisions on the Initiative's overall strategic direction, structural issues and budget decisions. Jacki Johnson, Advisor Climate and Sustainability, Insurance Australia Group Limited and Co-chair, ASFI is Co-chair of the UNEP FI Global Steering Committee.

1.4 Developing an Australian Sustainable Finance Roadmap

The concept of developing an Australian Sustainable Finance Roadmap was borne out of industry-led discussions that took place at the end of 2017 at the UNEP Regional Roundtable, and the 'Financing a Resilient and Sustainable Economy' conference hosted by UNEP FI, Responsible Investment Association Australasia, the Investor Group on Climate Change, National Australia Bank, Insurance Australia Group and University of Sydney in July 2018 in Sydney.

ASFI was launched on 27 March 2019 with the objective of creating a sustainable finance roadmap for Australia. The ASFI Steering Committee terms of reference were to oversee the delivery of an Australian Sustainable Finance Roadmap in 2020 and to ensure the Roadmap is informed, appropriate and implementable, with recommendations that will help Australia's financial system to:

- operate the financial system in a manner that meets community and consumer expectations related to sustainability and norms, while enhancing financial inclusion and financial well-being;
- enhance risk management practices through consideration of ESG risk;
- ensure better informed financial decision-making by enhancing disclosures and transparency about environmental and social risks and opportunities, to better account for and manage risk and impact;
- enhance the sustainability, resilience and stability of the financial system by embedding sustainability, climate and human rights and other social and environmental considerations into financial markets, products and services; and
- mobilise capital to deliver on national and global sustainable development and climate goals, commensurable with science-based targets and informed by international conventions, treaties and norms.

Financial institutions funded the establishment of a secretariat, with funding provided by ANZ, Australian Ethical Investments, Bank Australia, Cbus, Commonwealth Bank of Australia, Credit Union Australia, IFM Investors, Insurance Australia Group, National Australia Bank, Principles for Responsible Investment, QBE and Westpac.

Four ASFI technical working groups and a coordinating working group were established:

- Technical Working Group 1: Mobilising capital to deliver on our sustainability challenges and opportunities.
- Technical Working Group 2: Creating a more sustainable, resilient and stable financial system by embedding sustainability into systems, markets, products and services to better account for risk and impact.
- Technical Working Group 3: Making better informed financial decisions by enhancing disclosures and transparency.
- Technical Working Group 4: Meeting community and consumer expectations and putting people at the centre of finance's purpose.
- Coordinating Working Group: Delivering practical recommendations on over-arching and cross-cutting issues not captured in the technical working groups, including short-termism, valuation, taxation, accounting standards, culture and education.

Each technical working group had up to 20 members who were selected using an expression of interest process. Nineteen individuals from civil society were selected to form a Civil Society Advisory Group and were allocated to a technical working group or the coordinating working group as a member or observer. Members and observers were selected based on their skills and experience with the objective of ensuring that each working group had a balance of sector, gender, age and professional skill sets. Overall, over 140 individuals from more than 80 organisations have been involved in a process focused on delivering practical and implementable recommendations. ASFI working groups were formally established in July 2019 with co-chairs accountable for leading each group and contributing to the coordinating working group.

In addition to the deliberations of technical working groups, ASFI conducted two open consultations, inviting submissions from interested parties on the objectives of ASFI to inform the work of ASFI working groups. The first consultation was conducted from 19 July to 30 August 2019 and the second from 19 December 2019 to 21 February 2020. A list of organisations that made submissions to ASFI is provided on page 84.

In December 2019, ASFI released a progress report[28] identifying six critical challenges to address. These challenges were the focus of detailed work to develop recommendations that now form the Roadmap:

1. Leadership, culture and institutional structures

The importance of financial institution leadership – both through leaders within the industry and the industry as a whole – is key to ensuring that there is appropriate valuing of, and accountability for, sustainability performance and the broader impact of financial institution activities across Australian society, the environment and the economy.

2. Community and consumer interests and expectations

All Australians engage with – or are impacted by – Australia's financial system, whether through banking, insurance or investment. However, their level of understanding of the sector and involvement with it varies widely. Consumers have differing levels of access to financial services, financial capability, confidence and education, as well as variable expectations in the sustainability performance and ethics of their financial services products. The sheer reach of financial institutions requires a proactive approach to ensuring products and services serve Australians well and adequately meet their needs, interests and expectations.

3. Frameworks, tools and standards

The challenges in decision-making and valuation (discussed below) are closely linked to the frameworks, tools and standards used across the financial system to inform investment, lending and insurance decisions. As the sector grapples with evolving challenges, risks and opportunities, new sets of frameworks, tools and standards are rapidly emerging to fill gaps. To ensure long-term financial stability and that social needs are met, it is essential that we align tools, frameworks and standards to manage all risks and embrace opportunities.

4. Decision-making and valuation

Financial institutions rely heavily on valuation of risk to underpin the investment, lending and insurance decisions being made on a daily basis. Yet limitations with existing valuation tools, mainstream practices and a lack of quality data on environmental and social risks challenge the sector in being able to respond to the new sets of risks and opportunities. These challenges need to be addressed so that the sector can properly value risk and make better informed decisions.

5. Unlocking sustainable finance and allocating capital to where it is needed

Australia's financial system plays a key role in supporting a strong and resilient economy and in generating long-term prosperity for Australians through the allocation of capital. There is an urgent need to shift new and existing capital into investments that create and better support sustainable and equitable outcomes for Australian people, our economy, the environment and investment and trade in the region. Aligned and globally agreed definitions, labels and standards of what constitutes a sustainable investment or product would help facilitate capital flowing to sustainable outcomes, enable assurance and enhance comparability.

6. Policy, regulation and supervision

There is an important role for policy settings and regulator guidance and supervision to reinforce factors for sustainable finance. This will assist in setting clear direction for Australia's financial system and financial institutions. While much progress has been made in Australia already, further consistency and harmonisation of guidance in regulatory settings would enhance the financial system's ability to align with and support a prosperous and sustainable Australian economy, environment and society. Further, Australia's financial system is part of an interconnected and interdependent global financial system and needs to remain relevant and maintain access to the global financial system.

ASFI's deliberations in 2020 were disrupted by the impact of Covid-19. ASFI's Steering Committee and Working Group members responded dynamically as the impacts of Covid-19 became apparent. A decision was made to defer the release of the Roadmap until November 2020. This has allowed for an explicit consideration of the economic and social impacts of Covid-19, and the accommodation of virtual engagements with key stakeholders and participants.

The end product of extensive collaboration and consultations is the Australian Sustainable Finance Roadmap, a plan for aligning Australia's financial system with a sustainable, resilient, and prosperous future for all Australians.

The Roadmap's vision for Australia is a financial system:

- that is sustainable, resilient and stable and can manage systemic risks and other shocks and strains;
- that meets both the present and the long-term needs of all Australians, the environment and the economy;
- where financial decisions are informed and consider sustainability risks, impacts and opportunities;
- that enhances financial inclusion and well-being and informed choice; and
- where capital flows support Australia in delivering on sustainable development goals, including facilitating an orderly transition to a net zero emissions, resource-efficient and socially inclusive economy.

Figure 3: **Australian Sustainable Finance Roadmap approach to change**

Identifying the problem

The 21st century economy needs to be aligned with sustainable development – a prosperous economy that prioritises human wellbeing, social equity and environmental protection.

There is a need for financial system participants to play a more active and responsible role in promoting economic, social and environmental sustainability.

Defining the vision

A financial system:

- that is sustainable, resilient and stable and can manage systemic risks and other shocks and strains;
- that meets both the present and long-term needs of all Australians, the environment and the economy;
- where financial decisions are informed and consider sustainability risks, impacts and opportunities;
- that enhances financial inclusion and well-being and informed choice; and
- where capital flows support Australia in delivering on sustainable development goals, including facilitating an orderly transition to a net zero emissions, resource-efficient and socially inclusive economy.

Identifying the barriers and critical challenges to address – relevant areas (see page 23)

1. Leadership, culture and institutional structures
2. Community and consumer interests and expectations
3. Frameworks, tools and standards
4. Decision-making and valuation
5. Unlocking sustainable finance
6. Policy regulation and supervision

Identifying the domains of change

- **Embedding sustainability in leadership**
- **Integrating sustainability into practice**
- **Enabling resilience for all Australians**
- **Building sustainable finance markets**

Developing solutions and identifying who can lead and enable systems change

Who / What

Financial Institutions

- Leadership and accountability
- Purpose and strategy
- Culture
- Remuneration
- Capacity building
- Transparency, disclosure, reporting
- Product and service design
- Valuation
- Scenario analysis and stress testing
- Mobilisation of capital

Regulators

- Regulatory guidance and standards
- Vulnerability assessments
- Capacity building

Government

- Data
- Education and capacity building
- Regulations
- Frameworks
- Market architecture
- Resilience instruments
- Partnerships

Collaboration by financial system participants

- Market development and innovation
- Partnerships
- Targets and trajectories
- Definitions
- Standards
- Frameworks
- Codes, guidance, principles
- Capability and capability building
- Ratings and labelling
- Monitoring and evaluation

Others

- Transparency, disclosure and reporting
- Codes
- Collaboration
- Partnerships

Identifying commitments required by financial system participants to enable systems change

1. Supporting Australia to deliver the SDGs and its commitments to the Paris Agreement, Sendai Framework and Convention on Biological Diversity
2. Supporting transition of Australian economy to net zero emissions by 2050
3. Embedding sustainability into leadership, purpose, strategy, risk management and practice of financial institutions
4. Enabling the financial system to facilitate change by developing and implementing collaborative practices in a manner consistent with legal obligations (including competition law) across the whole of the financial system including government, regulators, financial institutions, households and communities

1.5 Australia's financial system

In considering the actions that Australia's financial system needs to take for Australia to manage the risks and grasp the opportunities resulting from a raft of environmental, social and economic challenges, the Roadmap draws on previous Financial System Inquiries. These include the Campbell Inquiry (1981),[29] Wallis Inquiry (1996)[30] and Murray Financial System Inquiry (2014),[31] and the Royal Commission into the Misconduct in the Banking, Superannuation and Financial Services Industry (2019).[32]

Aligning financial system participants' behaviour with long-term thinking and a clear sense of purpose is essential to creating a more sustainable financial system. Australia's financial system exists to serve society and meet the needs of all Australians. Indeed, the Murray Inquiry stated that the financial system's ultimate purpose is to facilitate sustainable growth in the economy by meeting the financial needs of its users. The Inquiry stated that the financial system will achieve this goal if it operates in a manner that is:

- **efficient**: an efficient system allocates Australia's scarce financial and other resources for the greatest possible benefit to our economy, supporting growth, productivity and prosperity.
- **resilient**: the financial system adjusts to changing circumstances while continuing to provide its core economic functions, even during severe shocks. Institutions in distress are resolvable with minimal costs to depositors, policy holders, taxpayers and the real economy.
- **fair**: fair treatment occurs when participants act with integrity, honesty, transparency, and non-discrimination. A market economy operates more effectively when participants enter into transactions with confidence that they will be treated fairly.[33]

This Roadmap builds on the Murray Inquiry definition of purpose but takes that one step further, by explicitly connecting the financial needs of Australian people with the impact that the financial system has on the real world, and hence on the lives and well-being of Australian people and the environment in which we live. This does not negate or undermine the financial objectives that underpin the financial system in any way; rather it places this objective in the broader context to recognise that every financial or investment transaction has a real-world impact, which in turn, impacts on individuals, communities and the natural world.

Further, the Roadmap acknowledges the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry. The Commissioner, the Honourable Kenneth Madison Hayne AC QC, stated in his final report, if the conduct "has not broken the law, the conduct has fallen short of the kind of behaviour the community not only expects of financial services entities but is also entitled to expect of them."[34]

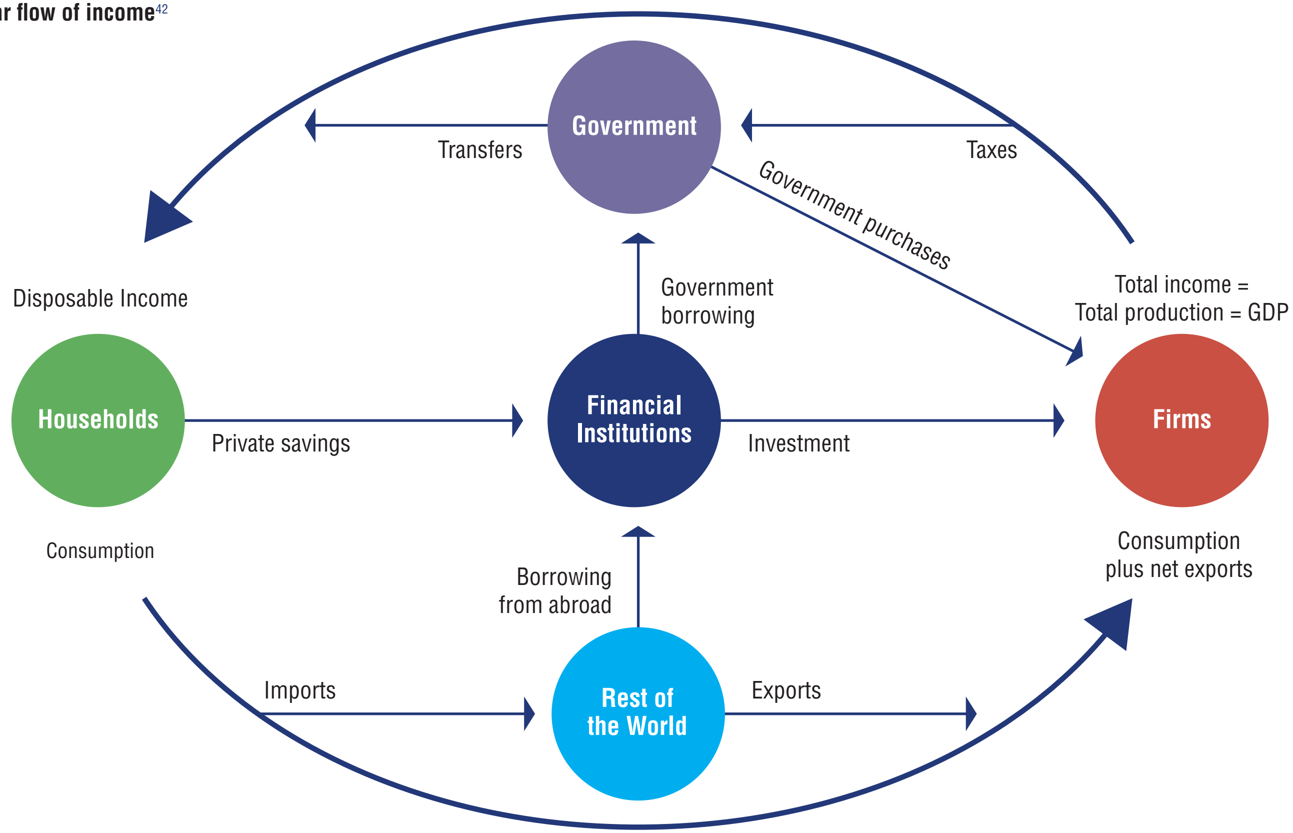
Culture and behaviour that embodies sustainability principles within and across financial system participants is essential for building a system that treats all people fairly and with dignity, with respect for the natural environment and with a recognition of the interdependence between the natural world and Australians' overall well-being, health and prosperity. The Royal Commission identified several shortcomings at different levels of the financial system and across financial institutions in terms of industry culture, ethics and behaviour. This Roadmap addresses some of these concerns and makes recommendations to foster leadership and improve governance frameworks and decision-making processes that are reflective of a more sustainable financial system.

Australia's financial system is a complicated system of intermediaries and markets that allocate capital, share risks and facilitate all types of trade that can be visualised as a circular flow of income, illustrated in Figure 4. The primary actors in Australia's financial system are governments and regulators, financial institutions, households and businesses. Financial institutions are critical influencers and enablers of activity across the financial system. Governments play multiple roles, including regulating the activities of financial institutions, and as investors and borrowers. Ultimately, however, the purpose of a financial system is to serve households and businesses.

Australia's financial system performs well globally in terms of stability, reliability and financial returns. Australia's four major banks all rank in the top 25 globally for safest banks, and Australia has the fourth-largest pool of investment fund assets in the world. By 2035, superannuation assets are predicted to increase to $9.5 trillion, reaching over 200% of Gross Domestic Product (GDP),[35] creating the potential to position Australia as a net exporter of finance to global capital markets. Australian general insurance companies issued 40.4 million retail insurance policies to consumers and small businesses in 2017 with an estimate that 74.3% of people and assets were covered by retail group policies.[36] With superannuation assets of $2.9 trillion,[37] a banking sector managing $4.2 trillion in assets, more than eight million buildings across Australia with a replacement value of $5.7 trillion needing to be insured, health insurers providing coverage for just over half of the population[38] and life insurers issuing more than 41 million cover types[39] and paying more than $12 billion in claims to around 100,000 Australians and their families in 2019,[40] the financial services sector is the largest contributor to the national economy, adding around $140 billion to GDP and employing 450,000 people.[41]

The Australian Government plays a critical role in establishing market and regulatory structures that are focused on delivering consumer outcomes and system stability. Australia's regulatory approach, which includes a strong practice of harmonising with global financial system regulation, has enabled Australia's financial institutions to weather crises, including Covid-19 and the Global Financial Crisis (GFC). Australia's long-standing practice of quality risk-based regulation is sound and provides the flexibility and adaptability to ensure that the system responds to new risks.

Figure 4: **Financial system circular flow of income**[42]



One of the implications of Australia's sound financial regulatory structure is its influence on the decisions of financial system participants. Superannuation funds are regulated through prudential standards that guide the practices of superannuation trustees. An implication of the ability for superannuation fund members to select where their superannuation funds are invested is the regulatory standards that have been established that ensure super funds maintain sufficient liquidity to meet member requests in a timely manner.[43] Unlike other international pension systems, Australia's system has greater constraints on the amount that can be invested in illiquid investments.

Australia's banking system has a strong regulatory framework that, consistent with the Basel III regulatory framework, aims to strengthen the regulation, supervision and risk management of banks. Basel III, and APRA's subsequent implementation, has meant that Australia's banking system is strongly placed to weather crises such as the current Covid-19 crisis. The need to maintain capital requirements impacts on bank lending decisions.

The general insurance, life insurance and health insurance industries are all subject to a regulatory environment that ensures they have the capital to meet obligations as and when they become due. Insurance relies on the ability to pool and price risks, which is impacted by fundamental changes in the risks themselves.

1.6 Challenges and threats to Australia's financial system

Australia's financial system is subject to several specific challenges and threats, which are discussed in detail in the following sections.

The challenges are summarised as follows:

- Australia's climate is virtually certain to get warmer, with increasing impacts from heat extremes. Ongoing drying of the climate of much of southern and eastern Australia is likely. Other challenges include ongoing sea level rise and an increase in some types of extremes, such as short-duration heavy rainfall.[44]
- In many places, Australia's biodiversity is being stretched to its limits. Biodiversity loss in Australia is among the highest in the world with threats to individual species and ecosystems.
- Australian society is under economic pressure, and this is being exacerbated by Covid-19. In 2018, 2.1 million Australian adults (8.4% of the population) were financially vulnerable, with underemployed or unemployed Australians at a higher risk of experiencing greater levels of financial stress.[45] Indigenous people in Australia are between two and three times financially worse off than non-Indigenous people, with around 30% of Indigenous households in income poverty.[46]

The summer bushfires of 2019/2020 and Covid-19 both highlight the materiality of system issues to the financial system. Both events have resulted in material impacts on banks, insurers and investors that go beyond the physical impacts on society and the environment.

1.6.1 Impact of Australian bushfires

Impacts of the Australian bushfires, which began in July 2019 and escalated from September 2019 to February 2020, were significant:

- A total of 3,094 houses were lost across NSW, Victoria, Queensland, ACT, Western Australia and South Australia.[47]
- Some 24–40 million hectares were burned across NSW, Victoria, Queensland, ACT, Western Australia and South Australia.[48]
- Tragically, 33 people died directly as a result of the 2019/2020 bushfires and others suffered physical and psychological injuries.[49]
- According to the *Medical Journal of Australia*, bushfire smoke was responsible for 417 excess deaths, 1,124 hospitalisations for cardiovascular problems and 2,027 for respiratory problems, as well as 1,305 presentations to emergency departments with asthma.[50]
- The Bureau of Meteorology noted in its *Annual Climate Statement 2019*, published in January 2020, that, "[t]he extensive and long-lived fires appear to be the largest in scale in the modern record in New South Wales, while the total area burnt appears to be the largest in a single recorded fire season for eastern Australia".
- World Wide Fund for Nature estimated that nearly three billion animals were killed or displaced: 143 million mammals, 2.46 billion reptiles, 180 million birds and 51 million frogs.[51]
- The Australian Government's Department of Agriculture, Water and the Environment published a provisional list of 113 animal species that are threatened with extinction as a result of the bushfires.[52]
- From an economic perspective, 38,416 insurance claims were made in relation to the summer bushfires, with losses estimated at $2.33 billion.[53] Coupled with the November 2019 hailstorms in South-East Queensland, the January 2020 hailstorms in ACT, NSW and Victoria, and the February 2020 East Coast storms and floods, insurers had already paid $3.85 billion to customers affected by last summer's bushfires, floods and hailstorms as at August 2020, with claims totalling almost $5.4 billion.[54]
- The estimated economic impact of the 2019/2020 bushfires on tourism, hospitality, agriculture and forestry was around $3.6 billion and a further $2 billion may have been incurred in health costs, although these figures, which relate only to direct costs, are likely to underestimate the true cost.[55]

The *Royal Commission into National Natural Disaster Arrangements Report*, released on 30 October 2020, concluded that Australia needs a national approach to natural disasters. The Commission recommended the establishment of a national entity dedicated to championing resilience across the nation with a focus on reducing long-term disaster risk and harmonising approaches across Australia. The Commission identified inconsistent data as hampering efforts of governments and other organisations to manage disaster risk, recommending that the Australian Government should play a national leadership role in coordinating national data, information and standard setting.[56]

1.6.2 Impact of Covid-19

On 11 March 2020, the World Health Organization (WHO) declared the novel coronavirus, Covid-19, a global pandemic. Covid-19 has severely impacted Australia. Australia's financial system has demonstrated operational resilience, responding to customers as they manage the financial implications of Covid-19 restrictions. Authorised deposit-taking institutions (ADIs) granted temporary support to affected customers by allowing them to defer loan repayments for several months. According to APRA data, the 20 largest ADIs deferred 896,000 loans amounting to around $266 billion.[57] As of 18 October 2020, $34.4 billion of early release superannuation payments have been made consisting of 4.6 million individual payments.[58]

Australia's financial regulatory system has responded proactively to Covid-19. At an operational level, financial system participants were well prepared for a pandemic, reflecting the efforts of Australia's financial regulators to ensure that financial institutions had well developed business continuity plans that were activated when the Covid-19 crisis hit.

Responses by financial regulators to Covid-19 included the Reserve Bank of Australia (RBA) injecting liquidity into the financial system, including a $90 billion term facility that enabled ADIs to borrow from the RBA at an amount equivalent to 3% of their existing outstanding credit to Australian businesses and households.[59] APRA has provided temporary capital treatment to ADIs, guidance to boards on payment of capital distributions to shareholders and guidance on ongoing stress testing and liquidity.[60]

Responses by financial institutions have included superannuation early release payments made in 3.3 days, on average, increased frontline resources dedicated to customers experiencing financial hardship and, in some cases, jobs brought back from overseas sites to strengthen local operations.

The Covid-19 crisis has highlighted the potential threat of systemic risks to the stability of financial systems around the globe. The coordinated efforts of Australia's financial regulators, based on a strong risk management approach, have meant that Australia's financial system entered the latest crisis from a place of strength, and the stability of the financial system has been managed well.

As Australia continues to manage the implications of Covid-19, the nation is also confronting diplomatic challenges that are impacting on Australian exports. Measures which have implications for Australia's financial system include the establishment of a new national security test for foreign investment.[61]

For Australia's financial system, the experience of cascading and converging crises has illustrated the importance of adapting dynamically to circumstances and the need to institutionalise collaborative practices, which will provide a foundation to manage future crises.

The work of addressing the environmental, social and economic challenges that face Australia's financial system has already begun. An example is the work of Australia's financial regulators (RBA, APRA and ASIC) to highlight that climate change is a risk that is "material, foreseeable and actionable now" and will "rise over time, if not addressed".[62] The focus on climate risk by Australia's financial regulators also reflects the influence of global regulatory standards that are established through groups including the Bank of International Settlements (BIS), IOSCO, the IAIS and the FSB.

2. Australia's climate

2.1 Climate risk and global warming

Climate change presents a systemic risk to Australia's economy and a financial risk for many of Australia's financial system participants. Adverse impacts of climate change also have the potential to undermine sustainable development.[63] Failure to address climate change is rated as the top global risk by impact according to the World Economic Forum's *Global Risk Report 2020*.[64] "Risk of climate-related impacts results from the interaction of climate-related hazards … with the vulnerability and exposure of human and natural systems, including their ability to adapt."[65] "Increasing magnitudes of warming increase the likelihood of severe, pervasive and irreversible impacts for people, species and ecosystems."[66] Sustainable Development Goal 13 aims to "take urgent action to combat climate change and its impact" and its indicators include adoption and implementation of a national disaster risk reduction strategy in line with the Sendai Framework.[67]

The Intergovernmental Panel on Climate Change (IPCC) estimates that human activities have caused approximately 1.0°C of global warming since 1880, with unprecedented changes to the climate system having been observed since the 1950s. Global warming has led to increased land and ocean temperatures, more frequent heatwaves on land and marine heatwaves, increases in intensity and frequency of droughts, floods and other extreme weather events, and sea level rises.[68]

The IPCC states that "continued emission of greenhouse gases (GHG) will cause further warming and long-lasting changes in all components of the climate system."[69] The IPCC has considered four possible pathways of GHG concentrations,[70] ranging from a stringent mitigation scenario (RCP 2.6 – low scenario), which aims to keep global warming below 2°C above pre-industrial temperatures, to a very high GHG emissions scenario, which projects 3–5°C (or even more) global warming by 2100 (RCP8.5 – high scenario). In all four scenarios, surface temperature is projected to rise and the change to 2035 is expected to be similar. However, by 2050, it is a different story and by 2100 global surface temperature is likely to exceed 1.5°C warming and potentially 2.0°C for all but the low scenario.[71] According to the Earth Systems and Climate Change Hub, a sustained trajectory of high emissions may make the low scenario impossible, at least in the medium term, and more recent climate modelling by Grose et al suggests the possibility of even greater warming later this century.[72]

Figure 5: **Observed and projected changes in carbon emissions and temperature**[73]

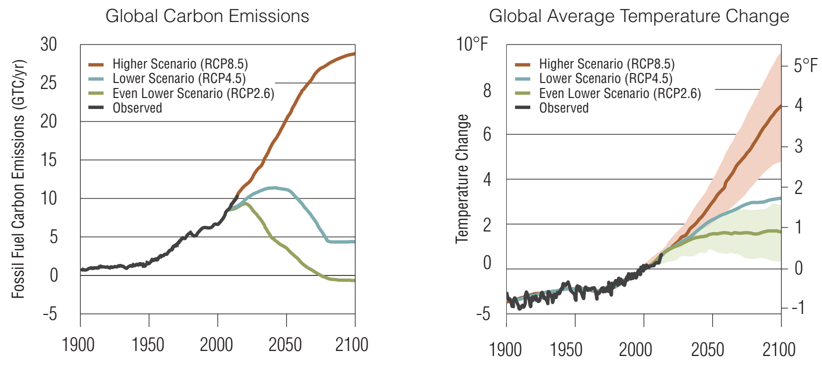


Figure 5: *Observed and projected changes in global average temperature (right) depend on observed and projected emissions of carbon dioxide from fossil fuel combustion (left) and emissions of carbon dioxide and other heat-trapping gases from other human activities, including land use and land-use change. Under a pathway consistent with a higher scenario (RCP8.5), fossil fuel carbon emissions continue to increase throughout the century, and by 2080–2099, global average temperature is projected to increase by 2.4°–4.7°C (shown by the burnt orange shaded area) relative to the 1986–2015 average. Under the even lower scenario (RCP2.6), assuming carbon emissions from fossil fuels have already peaked, temperature increases could be limited to 0.2°–1.5°C (shown by green shaded area) relative to 1986–2015. Source: Hayhoe et al (2018).*

Heat waves will be more frequent and longer, and there will be more intense and frequent extreme precipitation events in many regions. Sea levels will rise, and the ocean will continue to warm and acidify.[74] Under IPCC's four pathways, warming will continue beyond 2100 in all but the low scenario.[75] The IPCC has stated that, even with adaptation, warming by 2100 "will lead to high to very high risk of severe, widespread and irreversible impacts globally … without additional mitigation efforts beyond those in place today."[76]

Modelling by the IPCC indicates that there would be significant differences for natural and human systems between a 1.5°C and a 2.0°C scenario, with the latter presenting greater risks to society, the environment and economy.[77]

The IPCC states that overshooting 1.5°C could lead to some risks being "long-lasting and irreversible", including the loss of some ecosystems, and that impacts would be greater if we overshoot and return to 1.5°C as compared to stabilising at 1.5°C with no overshoot. The *United in Science 2019 High Level Synthesis Report* states that current commitments under the Paris Agreement need "to be roughly tripled for emission reduction to be line with the 2.0°C goal and increased fivefold for the 1.5°C goal".[78] We are therefore currently on track to overshoot 1.5°C.

IPCC projects that, based on current warming rates, human-induced global warming will reach 1.5°C around 2040.[79] By 2100, global warming is projected to reach between 2.9°C and 3.4°C by 2100, with continued warming beyond that date, based on current emission-reduction commitments.[80]

For Australia, scientists have indicated that limiting warming to 1.5°C relative to 2°C would reduce the frequency of extreme heat events and the likelihood of warm seas associated with bleaching of the Great Barrier Reef.[81] In addition, it would "reduce water stress and significantly reduce impacts on ecosystems and food production".[82]

2.2 Climate change impacts in Australia

In the period 1910–2016, Australia's climate has warmed by around 1.44°C (± 0.24°C), with most warming occurring since 1950.[83] Nine of the ten warmest years have occurred since 2004,[84] with 2019 the warmest (2.09°C above average[85]) and driest year on record. Much of Australia was affected by drought and there was widespread severe fire weather through the year.[86]

While year-to-year changes in Australia's climate are mostly associated with natural variability, warming of the climate is modifying the impact of these natural drivers on Australia's climate. The Bureau of Meteorology and CSIRO's *State of the Climate Report 2020*[87] stated that:

- since 1910, oceans surrounding Australia have warmed by around 1°C, which has contributed to longer and more frequent marine heat waves;
- sea levels are rising, which brings increased risk of inundation and damage to coastal infrastructure and communities;
- the acidity of oceans around Australia is increasing;
- rainfall from April to October has decreased in the south-west of Australia, with a decline of 16% since 1970;
- rainfall and streamfall across parts of northern Australia have increased since the 1970s;
- in recent decades, there has been an increase in the intensity of heavy rainfall events in Australia; and
- extreme fire weather and length of fire seasons have seen long-term increases across large parts of Australia and in southern Australia in particular.

In addition, extremely high temperatures have increased while extremely low temperatures have decreased.[88]

Further warming of Australia's climate and rising sea levels are a virtual certainty, and warming over Australia is expected to be slightly higher than the global average. We can expect increased impacts from heat extremes, further drying of much of southern and eastern Australia, and increases in extreme weather events, such as flash flooding.[89]

A recent report of the National Environmental Science Program's Earth Systems and Climate Change Hub for CMSI includes the following projections in relation to Australia's climate, using the IPCC's low scenario and high scenario:

- substantial changes in many hazards by 2030 for all emission scenarios, with changes similar for the low and high scenarios;
- increases in the annual average temperature of up to 1.5°C in the low scenario and up to 2.5°C in the high scenario by 2050 and of up to 1.5°C in the low scenario and up to 5.0°C in the high scenario by 2090;
- increases in average sea level of up to 30cm by 2050 in both the low and high scenarios, and of up to 1m by 2090 in the high emissions scenario;
- the south and east are expected to be drier in both low and high scenarios, with less rainfall between May and October;
- there will be a significant increase in the time spent in drought in many regions, in particular southern Australia;
- the annual average number of days over 35°C will also increase, with large increases (between an additional 25 and 100 days) in the case of the high scenario;
- increases in coastal flooding with 1 in 100-year extreme seal level events becoming annual events by 2100 under the low scenario and by around 2050 under the high scenario;
- increases in the incidence of extreme rainfalls, which will result in more frequent and severe flash flooding; and
- longer fire seasons due to an increase in the number of days with dangerous fire weather conditions, with an average increase per degree of global warming of about 20% (5 to 35%) for Australia in general.[90]

In addition, we can expect:

- an increase in the frequency of large to giant hailstorms in south-eastern regions of Australia, including in capital cities; and
- tropical cyclones to extend further south, and for these to be more intense.[91]

While climate variables are often reported on individually, the Bureau of Meteorology and CSIRO note that historically significant weather and climate events are often the result of compound events with multiple events occurring simultaneously, and that these are commonly the most impactful and hazardous. Climate change can exacerbate the frequency, magnitude and impact of some types of compound events.[92]

2.2.1 Implications for communities, health, environment and economy

Australia's communities and environment are already being significantly impacted by climate change, as demonstrated by the severe weather events over the past 18 months.

The increasing frequency and intensity of extreme weather events caused by further warming of Australia's climate poses serious consequences for Australia's communities, environment and economy.

Among these:

- increasing frequency of severe heat and intensity of droughts, floods and storms will affect agriculture[93] (11% of goods and services exported and 2.2% of Australia's GDP in 2018–19[94]) and other industries, and Australia's regional communities;
- extreme heat and heatwaves will have negative impacts on health, well-being and mortality, with older Australians most vulnerable;[95]
- a hotter, drier climate with rising sea levels will pose risks to the lands, waters and natural resources relied on by Indigenous communities;[96]
- extreme weather events, bushfires, marine heatwaves and increasing acidification of our oceans will have implications for marine and terrestrial ecosystems;[97]
- catastrophic bushfire events will threaten lives and livelihoods and, as the 2019/2020 bushfires demonstrated, have significant physical, financial and social impacts on communities;[98] and
- severe storms and sea level rises will pose risks to coastal areas, where much of Australia's population and infrastructure are located.[99]

Australia's ability to identify, manage and mitigate the impacts of climate change will have significant consequences for our future resilience, sustainability and prosperity.

Australia's neighbours in the Asia-Pacific region are also highly vulnerable to climate-related risks, including sea level rises and extreme weather events.[100]

Recent modelling by the University of Melbourne's Melbourne Sustainable Society Institute (MSSI) found that the expected damages for Australia of not meeting the Paris Agreement from now to 2050 would be $1.19 trillion.[101] MSSI notes this modelling does not fully account for extreme weather events, in particular damages from potential bushfires, which could add $1.5 trillion or more with potential cumulative losses from climate change of $2.7 trillion or more. By way of comparison, MSSI modelling found that the cost of meeting the Paris Agreement for Australia for 2050 would be around $122 billion.[102]

The linkages between climate change and health have been studied globally, in particular by the Lancet Commissions. In 2014, WHO estimated an additional 250,000 potential deaths annually between 2030 and 2050 for well understood impacts of climate change. According to the Lancet Commissions,[103] rising temperatures and changes in precipitation patterns alter the viable distribution of disease vectors such as mosquitoes carrying dengue or malaria. The Doherty Institute at the University of Melbourne notes that large mosquito populations in South Eastern Australia generally result in increased cases of Ross River fever because mosquitoes spread the virus from kangaroos and wallabies. The potential for dengue fever to spread to Australia through the spread of the Asian tiger mosquito (Aedes albopictus) is considered by the Doherty Institute to be a risk due to increased global trade. According to Professor John Fazakerley, Dean of the Faculty of Veterinary and Agricultural Sciences and Professor of Virology at the Doherty Institute, loss of habitat promotes the transfer of infectious diseases by forcing animals to move into different ecological niches which may move infectious diseases around between animals and between animals and humans.[104]

3. Australia's biodiversity

14 LIFE BELOW WATER
15 LIFE ON LAND

Australia's financial system has an impact on biodiversity through its investment, insurance and lending decisions. Biodiversity loss also creates risks for the financial system and financial institutions.

According to both the Organisation for Economic Co-operation and Development (OECD)[105] and the World Economic Forum's *World Risk Report*,[106] biodiversity loss is among the top global risks to society, with the planet now facing its sixth mass extinction. "Natural forests declined by 6.5 million hectares per year between 2010 and 2015, and natural wetlands declined by 35% between 1970 and 2015. Over 30% of corals are now at risk from bleaching, and 60% of vertebrate populations have disappeared since 1970."[107]

The OECD estimates that the loss of ecosystem services delivered by biodiversity such as crop pollination, water purification, flood protection and carbon sequestration between 1997 and 2011 cost the world US$4–20 trillion per year owing to land-cover change and US$6–11 trillion per year from land degradation. The OECD warns that ecosystems can only absorb pressure up to a certain threshold. Beyond this threshold, an incremental increase in human pressure can lead to a large, often abrupt, change in an ecosystem's structure and function. Such shifts tend to be persistent and irreversible (or costly to reverse), and can have profoundly negative environmental, economic and social consequences. According to Swiss Re Institute, 55% of global GDP, equal to US$41.7 trillion, depends on high-functioning biodiversity and ecosystem services, with a fifth of countries globally (20%) at risk of their ecosystems collapsing due to a decline in biodiversity and related beneficial services.[108]

The Convention on Biological Diversity produces a periodic report, *Global Biodiversity Outlook*, that summarises the latest data on the status and trends of biodiversity and draws conclusions relevant to the further implementation of the Convention. Released in September 2020, *GBO-5*[109] provides a global summary of progress towards the 20 Aichi Biodiversity Targets that were set a decade ago around five strategic goals: setting benchmarks for improvements across drivers; pressures; the state of biodiversity; the benefits derived from it; and the implementation of relevant policies and enabling conditions. *GBO-5* demonstrates that, at a global level, none of the Aichi Biodiversity Targets have been fully achieved.

Australia's 2019/2020 summer bushfires graphically illustrate the pressures Australia's biodiversity is under. It is estimated that between 24 to 40 million hectares of land were burned during these fires,[110] with nearly three billion animals killed or displaced, comprising 143 million mammals, 2.46 billion reptiles, 180 million birds and 51 million frogs.[111]

3.1 Impacts of climate change on Australia's biodiversity

The Climate Council of Australia[112] has captured examples of how climate change is already impacting Australia's biodiversity:

- Underwater heatwaves in the summers of 2015/2016 and 2016/2017, as part of the longest global coral bleaching event on record, devastated coral reefs worldwide, with catastrophic impacts on the Great Barrier Reef and others off the north-western Australian coast.
- Between late 2015 and early 2016, mangroves along a 1,000 km stretch of coastline in the Gulf of Carpentaria in northern Australia suffered significant mortality.
- Sea levels in northern Australia are currently rising at about twice the global average. Much of the World Heritage-listed Kakadu National Park is only 0.5m above sea level and intrusion of saltwater into freshwater wetlands is already evident, accelerating since the 1950s.
- Thousands of dry lightning strikes in January and February 2016 caused multiple intense bushfires in Tasmania, burning more than 120,000 hectares, including nearly 20,000 hectares in the Tasmanian Wilderness World Heritage Area. Ignitions from 'dry' lightning storms are increasing in frequency because of climate change, sparking many remote bushfires that are difficult to reach and control. The 2016 fires killed species in ancient Gondwanan forests including pencil pines.
- The forests dominated by river red gums lining the waterways and floodplains of the Murray–Darling River system have been dying. After being extensively cleared for agriculture, the gums and the ecological communities they support have suffered from the over-allocation of river flows to urban and irrigation uses. By 2008, mapping of River Red Gum stands along the Murray River (1,600 km) indicated that only 30% were in good condition, and in the Macquarie Marshes there was a 44% loss of river red gums between 1993 and 2012.

- In December 2015, marine heatwaves caused kelp forests that cover more than 71,000 km^2 around the southern mainland coast and Tasmania to wither and die.
- During December 2018 and January 2019, three significant fish kill events occurred in the Darling River near Menindee. Up to one million fish died, with Murray cod, silver perch, golden perch and bony herring the main species affected.
- World Heritage-listed Shark Bay in Western Australia is home to the most extensive and diverse seagrass beds in the world, covering 4,800 km^2. These beds filter nutrients and sediments, prevent erosion, store vast amounts of 'blue' (marine-based) carbon, and provide food and shelter for dugongs and many species of fish. A severe underwater heatwave in 2011, with temperatures 3.5°C above the Shark Bay average, resulted in the loss of up to 90% of seagrass cover at some sites, with extreme impacts on the dominant species known as 'wiregrass'.
- Climate change is making heatwaves in Australia longer, more frequent, and more intense. In November 2018, an extreme heatwave in the Cairns region resulted in daytime temperatures of over 42°C for two consecutive days. An estimated 23,000 spectacled flying foxes – one third of the entire population of the species – dropped dead out of the trees.[113]

3.2 **Building capacity**

According to researchers from the Threatened Species Recovery Hub, which is part of the National Environmental Science Program, biodiversity loss in Australia is among the highest in the world.[114] As the capacity of Australia's biodiversity, ecosystems and underpinning assets such as soils and water systems is being stretched to its limits in many places, researchers argue that Australia needs to deepen its understanding and develop knowledge, tools and resources around natural capital to support financial decisions applicable to the Australian context.

There is a clear role for financial system participants in considering biodiversity risk and impacts in their decision-making. Protection, conservation and restoration of Australia's unique environment for current and future generations will also require strong and effective environmental laws accompanied by appropriate monitoring, compliance, enforcement and assurance.[115]


L3
JUNIORS KINGSFORD
Juniors Kingsford
Randwick
Juniors Kingsford
L3 Circular Quay
L2 Circular Quay
L3 Circular Quay
R.M.WILLIAMS
McDonald's
NSW
Transport
02

4. Australian society

A series of fracture lines is evident across Australian society and present in areas including financial vulnerability, wealth inequality, homelessness and casualisation of work.

According to a 2019 University of Melbourne research study,[116] one in five Australians has less than $1,000 in savings and one in two has less than $10,000. One in eight Australians would not be able to raise $2,000 within one week in an emergency.[117] Research by the Australian Government's Australian Institute of Health and Welfare (AIHW)[118] reveals that more than one million low-income households were in financial housing stress in 2017–18.

Between 2006 and 2016, the proportion of Australian households renting increased from 22% (1.5 million households) to 27% (2.1 million households), with a 2019 study by the International Monetary Fund (IMF) indicating Australian housing is among the most expensive in the world. AIHW identified that, in 2018, 29% of renters were living on a periodic agreement (an agreement where the fixed-term has expired or no fixed term is specified) or rolling lease, 51% of renters were living in a home in need of repair, and 43% of all renters were finding it difficult to get by on their current income.

Wealth inequality has grown over the last 15 years, with people in the highest 20% experiencing average growth in wealth of 68%, while net wealth growth for the lowest 20% grew by just 6%.[119] Analysis of data on inequality by ACOSS found that while average household wealth exceeded $1 million in 2017–18, the average wealth of the top 20% was $3,255,000 and the bottom 20% was $36,000. Those in the lowest 10% held just $8,000 in average net wealth, and the bottom 5% held net debts of $5,000.

Mission Australia states that every night, more than 116,000 people in Australia experience homelessness. Despite accounting for only 3.3% of Australia's population, 20% of all people experiencing homelessness identify as Aboriginal and Torres Strait Islander and experience much higher rates of overcrowding. In 2018–2019, 18% of all people who received assistance from specialist homelessness services were under the age of 25. The proportion of older women experiencing homelessness has increased, with a rise of more than 30% in five years. Additionally, older women experiencing homelessness are typically hidden from view.[120]

There is increasing evidence of a persistent problem of insecure work in Australia. It is estimated that around four million workers are engaged either as casuals, on short-term contracts, in labour hire or as 'independent' contractors, with only 60% of workers in full- or part-time ongoing employment.[121] The fact that casual employees do not get paid holiday leave or sick leave is likely to have been a factor that has contributed to the spread of Covid-19. The Australian Council of Trade Unions (ACTU) notes that Australia is one of only seven OECD countries that does not put a limit on the maximum length of fixed-term contracts and recommends that a limit of four contracts or two years' service is imposed before the employee must be offered permanency.[122]

The financial system is itself collectively reliant on regular income from businesses and households. The increasing dominance of casual work is not in the interests of financial system participants. This includes banks that provide household lending, including mortgages, personal loans and credit cards, insurers that provide general insurance and health insurance products, and superannuation funds that receive regular payments from the Superannuation Guarantee. Insecure work exacerbates exclusion from the financial system and impacts on household welfare both in the short and long term.

5. Australian economy

A key discussion among economists is how to lift economic growth and productivity. RBA Governor Philip Lowe has cited several factors that he believes will impact future productivity, including the design of the tax system; provision and pricing of infrastructure; the way Australia finances innovation and new businesses; and the business culture around innovation, risk and entrepreneurship.[123]

Growth in Australian real GDP per capita has been consistently falling for over two decades. In the second half of the 1990s, this measure of economic activity often exceeded 3% per annum. The five-year average for growth in real GPD per capita has fallen 75%, from 3.2% in March 1999 to only 0.8% in March 2020. During 2019, growth of this measure was only 0.3%, hitting 0% in June 2019. The trend decline has persisted, regardless of extremely stimulative monetary policy, fiscal stimulus and higher debt. Population growth and stimulative policy have failed to accelerate real GDP per capita since the GFC. There was an increase in population growth from 1.3% to 1.6% following the GFC, and interest rates converged towards zero, but Multifactor productivity growth fell from 0.8% to 0.2%, consistent with the stagnation of productivity in many other countries. Real GDP per capita growth decelerated 64%, from 2.4% to 0.9%.

Part-time share of jobs has steadily risen for almost four decades, plateauing at 31–32% of employed people since 2016. Australia has one of the highest rates of part-time employment among both emerging and developed country peers.[124] Labour force participation is slightly above OECD peers, but not meaningfully above the median. Overall participation in the labour force peaked in August 2019, with flat male participation since 2014. Female participation has continued to trend upwards, however saw a slightly higher reduction during the 2020 recession than male participation. Australia benefits from a slightly higher share of working-age population as well as faster population growth, compared to other advanced economies.

Gross fixed Capital Formation was estimated at $436 billion during the last twelve months (23% of GDP) by the Australian Bureau of Statistics (ABS). Private spending (pre-Covid-19) accounted for 77% of total investment, and public for 23%. Dwelling investment is the largest single driver of private capital formation in Australia ($99 billion or 5.9% of GDP); it grew until the end of 2018 but has since declined, falling by 11% for the June-2020 quarter compared to one year ago. New housing starts have been heading into large decline. Mining investment declined each year from 2013 through to 2019 (2.7% of GDP), but has rebounded in the last twelve months with strength from iron ore.

Two categories of investment growth currently stand out: state government infrastructure programs and private spending on Intellectual Property. Intangible products, specifically software plus R&D, now make up one-tenth of total capital formation – $42 billion, which is 2.2% of GDP. State and local government capital formation has grown from $36 billion in 2015 to $56 billion for the year to June 2020 (providing counter-cyclical stimulus for the economy in the Covid-19 environment), making 14% of total public plus private investment. Beyond the largest segments, there are good signs for investment growth in three private industries: health care and social assistance (0.5% of GDP); professional, scientific and technical services (0.7% of GDP); and utilities and waste services (0.7% of GDP) including electricity networks, recycling and the energy transition from fossil fuels to renewable energy.

Covid-19 is impacting across the economy. Australian Government stimulus including JobKeeper and JobSeeker has kept many businesses and households afloat during 2020. The extent to which some borrowers will be able to repay their debts due to structural changes in the post-pandemic economy must be worked through. Employment surveys in mid-2020 showed the loss of 330,000 to 373,000 full-time jobs. During the early 1980s recession it took just over a year to lose 273,000 full-time jobs, while during the early 1990s it took two-and-a-half years to lose 454,000 full-time jobs.

Population growth is plummeting to the lowest levels in 100 years (with severe curtailment to migration/foreign students) and appears unlikely to bounce back swiftly. Businesses have been cutting capex and investment plans in response to revenue and profit declines as well as the uncertain outlook. Looking across six prior recessions and slow-downs in Australia, it has generally taken six quarters for private capital formation to move from peak to trough. On average, the low has occurred about two quarters after the middle of the contraction (likely the December 2020 quarter, on the basis that the recession troughed in the June 2020 quarter). The typical decline in capital formation has been 16% from these six historical instances.

Australian Treasury modelling on the potential impacts of a pandemic conducted in 2006[125] suggests that while quantifying the effects of confidence on household consumption and investment is difficult, with households reducing consumption, particularly of service-related goods, and with businesses curtailing both investment and employment, a highly contagious pandemic has the potential to result in GDP contracting by more than 5% over the first year following an outbreak.

The outlook for the Australian economy will depend on the quality of government policy decisions, spending decisions by households and businesses, dwelling construction, the global trading/investment backdrop and migration flows.

6. Green shoots

While Australia faces a raft of environmental, social and economic challenges, green shoots are emerging that are demonstrating the adaptability of business and communities across the economy and society. Among the green shoots, many initiatives are explicitly focused on addressing social challenges, including investments in affordable housing and communities. The following section outlines a series of case studies to illustrate just some of the developments that are being driven by businesses, communities and governments.

CASE STUDY

Electric vehicle charging infrastructure

The evolution from petrol to electric vehicles is gathering momentum with 2.1 million electric vehicles (EV) sold globally in 2018. Australia has been lagging global trends with just 2,216 sales in 2018.[126] A significant impediment to growth of EVs in Australia has been the lack of electric vehicle charging infrastructure. According to the International Energy Agency, there were 144,000 public fast (DC) chargers and 395,000 AC chargers worldwide at the end of 2018.[127] In 2019, Australia's national network comprised 1,930 electric vehicle charging stations.

Investment is beginning to flow to support the development of public EV charging stations. For example, Melbourne company JET Charge completed a $4.5 million Series A fundraise in June 2020 with support from the Clean Energy Finance Corporation (CEFC).[128] The fundraise will enable JET Charge to deploy smart charging hardware under a services-based model to help drive down the cost of smart and connected EV charging stations and make them more user-friendly for drivers. JET Charge believes that it is possible to make EV charging effectively free for Australian EV drivers within five years "through a combination of smart charging, demand response, ancillary grid services and vehicle-to-grid technology".[129] JET Charge's innovations include the development of a dashboard that provides live status on charging stations in an individual network, enabling clients to view utilisation numbers, calculate costs for electricity consumption and allow building of billing and revenue streams.[130]

AGL has recently announced that it will offer its customers a 'Netflix-like' subscription service delivering an electric car, charging station, insurance and registration for a flat fee. The scheme – to be piloted in Melbourne and Sydney by AGL Next – will cost $800 for initial set-up plus a weekly fee starting at $299. JET Charge will install the charging stations for AGL's subscription scheme.[131]

CASE STUDY

Battery storage

The development of battery storage capacity is stimulating investment in mining and manufacturing. Germany's sonnen Group, owned by Shell's New Energies division,[132] has established manufacturing facilities in South Australia to produce the sonnenBatterie, an intelligent home battery system that allows households to store solar energy generated from their rooftop solar systems. sonnen aims to produce 10,000 batteries a year out of the former Holden factory to meet demand from Australian households and for export to the Asia-Pacific region. It plans to create up to 430 new jobs in South Australia.[133]

The 30MW / 30MWh Ballarat Energy Storage System – supported by the Victorian Government's Victorian Energy Storage Initiative and the Australian Government's Australian Renewable Energy Agency (ARENA) – is an example of the development of a large battery storage system that can support grid stability. The battery is used to store energy at times when demand is low, and supply into the electricity market during high-demand periods when demanded by customers. EnergyAustralia holds the rights to charge and dispatch energy from the battery via a first-of-a-kind storage services agreement with AusNet Services. The Ballarat Energy Storage System is capable of powering more than 20,000 homes for an hour of critical peak demand before being recharged.[134]

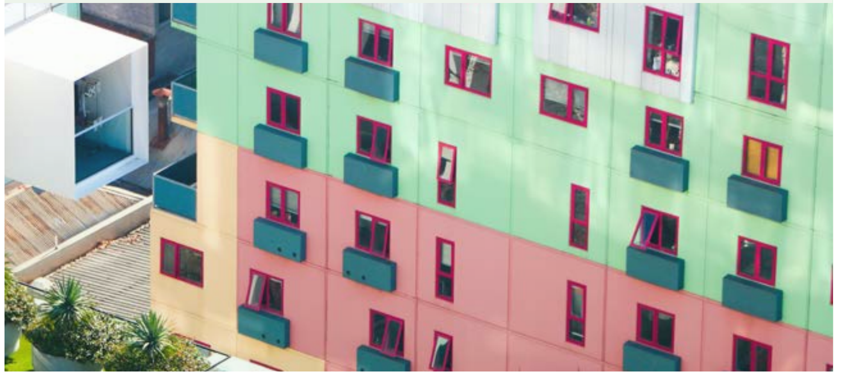
CASE STUDY

Affordable housing

Reflecting that many Australians are facing challenges securing affordable housing, the Australian Government's National Housing Finance and Investment Corporation (NHFIC) issued a $562 million bond in 2019[135] that was supported by institutional investors including Cbus Super, which was allocated $30 million in the issuance.[136] The NHFIC bond will result in investment in 775 new affordable homes and support 2,736 properties across ten community housing providers in NSW, South Australia, Victoria and Tasmania. NHFIC has now issued around $1.2 billion in bonds supporting the delivery of more than 1,700 new and 5,400 existing homes built and managed by community housing providers.

NHFIC bonds illustrate the different roles that financial system participants – including governments, banks, institutional investors and community housing providers – can play through collaboration to deliver outcomes.[137] Community housing providers that will support the delivery of affordable housing include SGCH Sustainability, Mission Australia Housing, Bridge Housing, Argyle Community Housing and Pacific Link Housing (NSW); BaptistCare (NSW & ACT); Common Equity Housing Ltd and Women's Housing Limited (Victoria); Junction and Women's Housing (South Australia); and Housing Choices Tasmania (Tasmania).[138] There is the potential for community housing to develop into a stand-alone asset class, with capital markets playing a key role channeling capital into the sector.[139]

The NHFIC bond comes as the banking sector provides new opportunities for specialist housing providers to secure long-term funding. An example is National Australia Bank, which has committed $2 billion to provide loans and is developing new financing avenues for not-for-profit groups and other organisations that build affordable and specialist housing, including crisis accommodation, community housing, disability housing, build-to-rent properties and sustainable developments.[140]



CASE STUDY

Community investment

Community-focused mutuals, co-operatives and social enterprises are being energised as local communities are empowered to address their own challenges.

In 2012, Hepburn Wind developed Australia's first community-owned wind farm near Daylesford, Victoria.[145] More than 1,900 people pooled $9.7 million to build a two-turbine, 4.1MW wind farm at Leonards Hill, with generation starting in June 2011. The project has spawned increased interest in community-owned energy projects including the 1MW SolarShare project in Canberra, which will be co-owned by around 500 local community members, producing enough power to supply around 250 Canberra homes. The SolarShare project will benefit from a 20-year power purchase agreement signed with the ACT Government, with the project to contribute to the territory's commitment to purchasing 100% of its power from wind and solar.[146]

New co-operatives are being developed such as the Yackandandah Community Development Company Ltd (YCDCo) in Victoria, which was established in 2002 by the local community when Yackandandah's only fuel station was set to close. The co-op has since established its own self-sustaining solar energy company, Totally Renewable Yackandandah, aimed at putting solar panels on as many rooftops as possible, with the goal of powering the township on 100% renewables by 2022.[147]

The new real-time-earth ground station in Alice Springs, built, project-managed and owned by Indigenous companies, including the Centre for Appropriate Technology (CfAT), is a hybrid space and ground network that will enable tracking of low orbiting satellites for earth observation. CfAT has indicated the station can be used to develop programs to assist with land management, carbon farming and fire monitoring. CfAT partnered with global communications company, Viasat, in the development of the station and the Commonwealth Government authority, Indigenous Business Australia, helped finance the project which provides economic and social returns for Aboriginal people.[148]

CASE STUDY

Waste and recycling

When China notified the World Trade Organisation (WTO) in July 2017 that it planned to restrict imports of 24 types of waste as part of its Blue Sky/National Sword program, this triggered a waste management crisis in Australia. One of the outcomes of China's ban has been to identify the need for significant investment in waste management infrastructure.[141] The need for investment is becoming urgent with expectations that the flow of recyclable waste will increase over coming decades.[142]

Green shoots include the build of a 29 MW waste-to-energy plant in Rockingham Industrial Zone, south of Perth that will have capacity to power 40,000 homes from an annual feedstock of 300,000 tonnes of municipal, industrial and commercial rubbish. The Australian Renewable Energy Agency is providing an $18 million grant towards the $515 million project, which will also receive up to $57.5 million in debt from the CEFC. French utility company Suez has signed a 20-year agreement to operate and maintain the facility, which will be jointly owned by a consortium of investors that includes John Laing, HZI and ACCIONA.[143]

The development of Australia's waste recycling industry is likely to benefit from the Australian Government's Recycling and Waste Reduction Bill 2020 that aims to establish a national framework to manage waste and recycling across Australia. The Australian Government estimates that the impact of the Commonwealth, state and territory governments' decision to ban export of waste plastic, paper, glass and tyres is expected to see the Australian economy generate $1.5 billion in additional economic activity over the next 20 years.[144]

Social enterprises are springing from local communities including:

- Vanguard Laundry Services,[149] a Toowoomba based social enterprise commercial laundry creating employment opportunities for people previously excluded from the workforce;
- Mettle,[150] a Perth-based social enterprise that produces gift hampers filled with sustainable goods, employing women escaping domestic violence;
- the Food Connect Shed,[151] which has raised $2 million in a crowd-funding campaign to turn a 'grey old shed' in Brisbane into a sustainable food operation; and
- Hireup, the largest online network of support workers in Australia and a National Disability Insurance Scheme-registered provider, which is using an employment-based model to hire support workers.[152]

7. Recommendations

The recommendations that follow represent the Roadmap (or plan) for aligning Australia's financial system with a sustainable, resilient and prosperous future for all Australians. The Roadmap represents the collective output of more than 140 participants from over 80 organisations across Australia's financial system, including financial institutions, civil society, academia, regulators and government, who came together to form ASFI.

The Roadmap provides a suite of practical and implementable recommendations for creating a sustainable financial system: one that meets the needs of the present without compromising the ability of future generations to meet their needs, and that can deliver improved social and environmental outcomes for Australia, including supporting job creation, more resilient communities, a cleaner, healthier environment, and climate risk mitigation and adaptation.

Facilitating the transition to a resilient and sustainable economy and society will require action by various parts of the financial system and by others who interact with the system. ASFI's focus in developing the Roadmap has primarily been on identifying actions required across the whole of the financial system in a manner consistent with legal obligations (including competition law). ASFI recognises that different financial system participants will be at various stages of alignment with the proposed recommendations.

The Roadmap's recommendations are categorised under the following four domains:

1. Embedding sustainability into leadership

2. Integrating sustainability into practice

3. Enabling resilience for all Australians

4. Building sustainable finance markets

The recommendations are followed by an Action Plan, which indicates who is best placed to implement each recommendation and the timeframe within which implementation is recommended. Implementation of many of the recommendations can and should begin in 2021.

Implementation of some recommendations will require other recommendations to be in train or completed. All should be implemented or embedded as an ongoing or regular activity by 2030 to:

- support Australia in meeting its commitments under the SDGs; and
- to address the urgency with which action needs to be taken to maintain an average global temperature rise below 2°C this century, and to pursue efforts to limit rises to 1.5°C.

Aligning the financial system to support a more resilient, sustainable and prosperous future for all Australians will require commitment by financial system participants to:

- support Australia to deliver the SDGs and its commitments to the Paris Agreement, Sendai Framework and Convention on Biological Diversity;
- support the transition of the Australian economy to net zero emissions by 2050;
- embed sustainability into leadership, purpose, strategy, risk management and practice of financial institutions; and
- enable the financial system to facilitate change by developing and implementing collaborative practices across the whole of the financial system.

The 'institutionalisation' of collaboration consistently with legal obligations (including competition law) will be a key enabler to successful implementation of the Roadmap, with collaboration required across Australia's financial system, including between financial institutions, regulators, government and other stakeholders.

7.1 Embedding sustainability into leadership

7.1.1 Leadership of financial institutions – governance, purpose and strategy

The Board of Directors of an organisation has ultimate responsibility for the corporate strategy and culture of the organisation, and ensuring it monitors and reports on the organisation's performance in accordance with its goals and strategy. In addition, the board is accountable for the organisation's purpose and overseeing the entity's risk management framework and capital allocation.

Therefore, boards have a critical role in determining the long-term success of an organisation[153] and the creation of long-term value for the organisation, and for society. Sustainability is "central to corporate competitiveness" and an organisation's "continued ability to operate."[154] For organisations to create long-term value, it is necessary that they take into account their impact on others and their dependency on environmental, social and economic systems, and "embrace the risks and opportunities of sustainable development."[155] For this to occur, sustainability should be properly embedded within corporate purpose and strategy. The board is in the best position to do this.[156]

While several financial institutions are approaching sustainability in this way, for others it is an opportunity to move from thinking of sustainability as being about risk mitigation to "both risk mitigation and opportunity maximization."[157] Boards can formulate goals and make strategic decisions with a view to long-term value creation for their organisations (and its owners, shareholders and providers of finance) and for society and the environment by using a clear framework for managing long-term value creation, considering the needs of all primary stakeholders, and curbing excessive short-termism.

For a board to do this, it must have clear accountability for sustainability and, collectively, board members must have skills and experience in sustainable development and sustainability risks.

The assumptions that an organisation makes in its corporate strategy shape its behaviour, policies and practices and drive its subsequent decisions and results.[158] Embedding sustainability within corporate strategy has the capacity to drive employee behaviour, culture, remuneration practices and risk management, resulting in better long-term outcomes for the organisation and its stakeholders, including consumers, employees, suppliers, communities and shareholders.

Australia's financial system impacts the whole of the Australian economy and society. Australia's financial system needs a shared language and uniform way of measuring, managing and reporting the economic, social and environmental impacts it has on others, to promote impact integrity, comparability, trust and confidence, and to contribute towards achieving the SDGs, including reducing negative impacts.

Directing more capital to where it is needed most requires parameters for measuring, managing and consistently and transparently communicating the contributions institutions and investments make to the SDGs, and their other positive and negative impacts on society and the planet.

Frameworks are being developed that are freely available and competitively neutral, which can be used with existing tools and data sources. Examples include the Impact Management Project that is being developed through consensus with more than 2,000 organisations globally. The Impact Management Project focuses on front-end reliable and consistent impact measurement and management practices from which high-quality comparable impact reporting can flow. The Impact-Weighted Accounts Project is seeking to create accounting statements that transparently capture external impacts in a way that drives investor and managerial decision-making.[159]

Measuring and managing impact has the potential to improve impact integrity. Impact evidence creates value, helps companies stay true to their purpose, and allows them to articulate the effect of their operations, which is valuable to all stakeholders, supports attracting capital and investment, and improves efficiency.

Recommendation 1

Accountability for sustainability is led from the top of financial institutions. This will be most successful when sustainability is integrated in purpose, corporate strategy, risk management frameworks, remuneration structures and organisational culture.

Financial institutions manage and measure the impact of their activities on others.

7.1.2 Human capital

Aligning Australia's financial system with a sustainable, resilient, and prosperous future for all Australians will require a fundamental commitment to investing in human capital. Financial institutions directly employ 450,000 people, with many more engaged in activities that are core to the operational functionality of Australia's financial system. Implementation of the Roadmap will ultimately come down to strengthening the skills, capabilities and values of individuals.

Australia's financial institutions have a long history of developing professional capabilities of employees through in-house and industry training. The industry also has close working relationships with Australian universities that provide the education foundations for the sector's employees across a range of professional disciplines. By continuing to partner with existing industry training organisations and universities, Australia's financial system participants can keep developing the new skills and capabilities that will be required to support transition. This training will be required across the breadth of roles and at all levels of an organisation, including at board and executive levels.

Recognising that the delivery of change involves collaboration with many partners, including governments and civil society, partnerships need to be a 'two-way street' that build the skills of governments and stakeholders to understand the financial system. The magnitude and scope of transition means that there are areas where financial institutions are not likely to develop a depth of skills and capabilities. This will be the case particularly in areas such as biodiversity, where deep pools of expertise exist across government, academia and communities. In order to capitalise on this expertise, Australia's financial institutions can build strategic skills partnerships with experts to build mutual understanding and improve impact.

Resilient Australian landscapes and cultural awareness are areas that have been identified where there is a need for formal skill exchanges. For Australian landscapes to support a prosperous, sustainable and culturally rich society, new knowledge regarding adaptation and resilience needs to be embedded into financial institutions' practices. A two-way skill exchange would have the objective of supporting new finance and investment innovations to unlock a flow of capital as well as embedding biodiversity, marine diversity, water and natural capital into financial institutions' decisions. Areas of focus of collaboration could include natural capital, biodiversity and landscape resilience, risk management and mitigation, impact mitigation, large-scale planning, forecasting, natural capital accounting and cultural awareness training with a focus on Indigenous culture, metrics and reporting.

Several countries have supported the development of sustainable finance institutes as a key mechanism to enable skill and capability development. Examples include the UK's Green Finance Institute[160] and Canada's Institute for Sustainable Finance.[161] The UK has also developed a UK Green Finance Education Charter, which commits relevant financial professional bodies in the UK and internationally to integrating green and sustainable finance into their educational and professional development programs.[162] Support from financial system participants for the establishment of university-hosted centres for sustainable finance has the potential to build skills and capabilities in specific areas, including climate modelling, scenario analysis, stress testing, carbon markets, valuation of externalities, and impact measurement and management practices.

There is an opportunity to harmonise and partner with international initiatives, including the UN Sustainable Development Solutions Network, which has developed an Online Master's Program in Sustainable Development, and the Principles for Responsible Management Education (PRME). Working in partnership with the Australian university sector would ensure that core curriculum for all finance and related discipline degrees includes sustainability. As new employees enter the workforce in a raft of different professional disciplines and organisations, the building of foundational skills would support financial system participants to transition.

There is a need to focus on building organisations' internal cultures as well as building cultural practices across financial institutions that ensure a purpose- and values-driven approach. This should ensure all primary stakeholders are at the centre of decision-making.

The Banking and Finance Oath is recognised as an initiative that supports individuals to reflect on what it means to behave ethically, and with integrity.[163] Recognition and commitment to a higher purpose for a financial institution is important to support sustainability goals and the responsible consideration of multiple stakeholders. The Banking and Finance Oath provides a model for individuals to take personal responsibility for ethical conduct and building a sustainable future, however, adoption has been low, with accountability and funding both limited. Other relevant codes include the CFA Institute's code of ethics, which charter holders must meet.

There is a need for financial institutions to resource the development of codes for employees. These should be broad in their coverage and extend beyond just senior executives, who are covered by the existing Banking Executive Accountability Regime, which is to be extended by the Australian Government's Financial Accountability Regime.

To support an inclusive corporate culture, there is a need for financial institutions to move beyond statutory whistleblowing requirements to establish a culture that facilitates and promotes employees to speak up. This would build on reforms that now protect whistleblowers who call out misconduct and harm to consumers and the community.[164]

Remuneration is a key driver of behaviour. Remuneration structures are often heavily biased towards near-term financial performance with environmental and social considerations still often seen as non-financial, even when financial implications of mismanaging these risks are identified as material. The lack of alignment of remuneration structures with sustainable long-term value creation puts at risk the long-term financial performance and stability of the broader economy and the sector.

In order to achieve long-term sustainable outcomes for society and the environment, remuneration for senior executives and employees needs to take into account medium- to long-term social and environmental performance targets. It is noted that calls for enhancing remuneration practices with sustainability-focused targets can apply both to remuneration practices within corporations and to remuneration practices for financial service providers, including fund managers. There is the potential for quantitative and qualitative social and environmental targets to be introduced with remuneration aligned to the achievement of the target, and for this to be coupled with rebalancing of scorecards, which currently tend to emphasise short-term financial key performance indicators.

Embedding sustainability into strategy will require organisations to design incentive packages for senior executives and employees that are aligned with the expected time horizon of the organisation's activities. Questions continue to exist as to the role that bonuses should play in remuneration. Where bonus structures exist, a larger portion of the overall incentive needs to be escrowed to align with the conclusion of the expected time horizon.

Recommendation 2

Australia's financial system participants collectively build the skills and capabilities that will be necessary for Australia's financial system to support a sustainable, resilient and prosperous future for all Australians by:

- working with existing industry training organisations to deliver new skills and training in sustainable finance across all levels of an organisation;
- supporting the establishment of university-hosted centres for sustainable finance;
- working with the Australian university sector to ensure that core curriculum for all finance and related discipline degrees includes sustainability; and
- developing strategic skills partnerships with experts outside of financial institutions to build mutual understanding.

Recommendation 3

Financial institutions build inclusive corporate cultures that facilitate and promote the ability of employees to speak up, and strengthen personal professionalism through proactive support of industry-funded employee codes.

Recommendation 4

Recognising the strong link between strategy, remuneration, risk and performance, financial institutions:

- align remuneration structures with sustainable long-term value creation; and
- consider embedding sustainability targets into remuneration and incentive practices, and rewarding for sustainability performance and leadership, for example through promotion decisions.

7.1.3 Leadership to implement Roadmap

Integrating sustainability into the leadership and practices of Australia's financial system cannot be achieved overnight. It requires leadership from all financial system participants to build the skills, capabilities, tools, frameworks and market architecture that will support the long-term transition of the Australian economy and society.

To assist with this process, it is recommended that ASFI is established as a permanent body overseeing the implementation of the Australian Sustainable Finance Roadmap, noting it already has an established network of committed financial system professionals who have worked on the Roadmap's development. Recommendation 5 (see overleaf) details ASFI's proposed work program and governance structure.

ASFI would provide guidance to financial system participants through special projects and forums, consistently with legal obligations of all participants (including competition laws). Four proposed forums would provide the structure for permanent cross-sector engagement on issues and guidance to industry on implementation of ASFI's recommendations:

Financial Risk and Sustainable Practices Forum

This forum would provide a mechanism for discussion on the development and implementation of practices in the following areas:

- stewardship;
- reporting according to the TCFD recommendations;
- implementation of a sustainable finance taxonomy in Australia;
- vulnerability assessments, scenario testing and climate modelling;
- regulatory mechanisms that incentivise Australian financial institutions to allocate capital towards green and other sustainability-linked assets; and
- nature-related financial disclosures aligned to Australia's biodiversity challenges.

Sustainable Finance Markets Forum

This forum would provide a mechanism for discussion and collaboration on market-based mechanisms to mobilise finance, investment and insurance that support the delivery of a sustainable and resilient Australian economy and society. Areas of focus would include:

- transition of energy markets to net zero emissions, with a focus on balancing of new supply;
- transition of industries and communities impacted by the transition of Australia's energy system and anticipated closure of existing carbon-intensive assets;
- development of sustainable bond markets, including resilience bonds;
- development of scalable impact investment social enterprise finance;
- support for the development of partnerships to aggregate small social enterprise loans;
- support for the development of place-based recovery strategies, which engage local communities while being aggregated across a regional scale to maximise the investment footholds required by private and institutional investors; and
- support for the development of investment initiatives to strengthen the recovery from Covid-19.

Leadership Forum

This forum would provide a mechanism for discussion and collaboration on a range of areas where leadership has the potential to deliver meaningful contributions to building a resilient and sustainable economy and society as follows:

- development of structural collaborative mechanisms to work with experts, including the potential to establish university-hosted centres for sustainable finance, with the objective of addressing skills and capability gaps of financial institutions and their employees. Such mechanisms could provide an opportunity for two-way exchange enabling a deeper understanding of strengths and weaknesses of Australia's financial system;
- discussion on collaboration with industry training organisations;
- discussion on implications of international treaties and conventions on Australia's financial system;
- the opportunity to support countries across the Asia-Pacific region to build resilient and sustainable economies and societies;
- collaboration to support financial institutions to establish Financial Inclusions Action Plans and review current practices and design of products and services to embed financial inclusion;
- collaboration to build societal resilience to acute shocks as well as chronic threats to climate and health, which amplify the impact of acute shocks on the most vulnerable, by developing income and revenue contingent loans as a mechanism to support individual and community resilience;
- collaboration around mitigation initiatives for communities; and
- sharing best practice on initiatives that build personal professionalism of employees.

Australian Sustainable Financial System Forum

This forum would provide a mechanism for financial institutions to report on their progress in supporting the delivery of a resilient and sustainable Australian economy and society. The forum would provide a mechanism for policy discussion, including on relevant international sustainable finance initiatives such as the Principles for Responsible Investment and UNEP FI, which includes the Principles for Responsible Banking and the Principles for Sustainable Insurance.

Participation would include representatives from industry and stakeholder bodies.

Recommendation 5

The Australian Sustainable Finance Initiative (ASFI) is established as a permanent body that supports Australia's financial system to deliver a sustainable, resilient and prosperous future for all Australians. ASFI would be governed by a Board composed of representatives of financial institutions, with an Advisory Council composed of government, regulators, industry bodies and civil society representatives contributing perspectives and providing advice to the Board on workplan priorities.

Based on the model of the Australian Government's Council of Financial Regulators, the ASFI Advisory Council would convene on a regular basis with state and federal government departments, with the objective of ensuring the work of ASFI is informed by government and societal priorities.

ASFI would undertake a phased program of work to coordinate and facilitate collaboration on implementation of the Roadmap. This would include delivery of an annual statement on the financial system's collective progress in implementing the Roadmap's recommendations, and reporting on the development of partnerships with federal, state and local governments.

As a mechanism to provide guidance on implementation, ASFI would establish special projects and forums consistently with legal obligations of all participants (including competition laws). It is recommended that four forums are established:

1. Financial Risk and Sustainable Practices Forum
2. Sustainable Finance Markets Forum
3. Leadership Forum
4. Australian Sustainable Financial System Forum

All ASFI Forums would specifically consider Australia's role in the Asia-Pacific region with respect to sustainable finance.

A key principle in determining whether ASFI would take on a specific project would be whether it has implications across the whole of Australia's financial system.

Priority special projects would:

- explore the implementation of a sustainable finance taxonomy in Australia;
- establish interim science-based targets and trajectories that will support individual financial institutions to make net-zero-aligned decisions on lending, insurance and investment;
- develop best practice principles to guide product design, delivery and disclosure to drive sustainable and community focused outcomes;
- work with the Climate Measurement Standards Initiative (CMSI) and other stakeholders to develop guidance for financial institutions to support reporting according to the Task Force on Climate-related Financial Disclosures (TCFD) recommendations; and
- develop guidance for nature-related financial disclosures aligned to Australia's biodiversity challenges.

ASFI would also establish a First Peoples Financial Services Office led by an Aboriginal or Torres Strait Islander person (see Recommendation 6 overleaf).

7.1.4 Aboriginal and Torres Strait Islander peoples

From the perspective of Australia's financial system, Indigenous people are individual consumers of financial services and investors in the system. Indigenous people may be dealing with their monies as individuals and also investing funds on behalf of groups of Traditional Owners whose interests in land and water have been converted into investable funds, often as the result of acquisition, mining and development. The conversion of interests is provided for by Commonwealth, state and territory legislation recognising Indigenous rights over their land and waters, but the absence of a right of veto over acquisition, mining and development in most legislation means that the important human right to free, prior and informed consent is absent. Since the introduction of these laws, Indigenous communities and their leaders have exercised rights to protect their heritage where possible and endeavoured to optimise the financial benefits derived from these rights and interests, addressing the needs and aspirations of each community to build a sustainable economic future underpinned by recognition of Indigenous Australians' cultural values.[165]

ASFI would establish an Indigenous-led First Peoples Financial Services Office to facilitate financial system engagement with Indigenous communities and organisations on a range of issues related to the inclusive design and delivery of financial services; build genuine partnerships; encourage more accessible banking and superannuation services, suitable insurance products and disclosure processes; and demonstrate respect for the rights of Indigenous peoples in the due diligence processes by investors. The Office's activities, which would be Indigenous-led and designed in collaboration with Indigenous organisations, would aim to support the self-determination of Indigenous peoples. The Office would educate and support financial institutions to effectively engage with Indigenous communities, including on specific issues or projects. It is recommended that the Office:

- focus on coordinated collaborative solutions that deliver more than individual actions;
- be a single point of enquiry for engaging with Indigenous peoples including providing guidance on the operation of the principle of free, prior and informed consent (see further below) and methodology for due diligence on implementation of the principle by companies and on particular projects;
- capacitate building Reconciliation Actions Plans by financial institutions, including by providing frameworks and tools, and benchmarking industry performance; and
- coordinate, in practice, the application of Indigenous Investment Principles so that financial institutions can rely on this resource to provide the appropriate advice, information and other resources.

It is recommended that, operationally, the Office:

- have a close relationship with the Australian Human Rights Commission, with high-level meetings to be held at regular intervals;
- liaise with the Productivity Commission and the Indigenous Productivity Commissioner;
- liaise with Indigenous Business Australia and other relevant Indigenous bodies; and
- advise on practical and meaningful engagement with the appropriate representatives and bodies.

Recommendation 6

Australia's financial system participants establish, through ASFI, a First Peoples Financial Services Office. This Office would be led by an Aboriginal or Torres Strait Islander person to:

- facilitate financial system participants' engagement with their communities and organisations on a range of issues related to the inclusive design and delivery of financial services;
- build genuine partnerships;
- encourage more accessible banking and superannuation services, suitable insurance products and disclosure processes; and
- demonstrate respect for the rights of Indigenous peoples in the due diligence processes by investors.

Recommendation 7

In recognition of Aboriginal and Torres Strait Islander peoples' rights to self-determination, financial institutions work to codify the principle of free, prior and informed consent in decisions made by financial institutions. This would include:

- providing finance where there has been consultation and cooperation in good faith with any Indigenous peoples concerned through their own representatives and representative institutions in order to apply the principle of free, prior and informed consent, and reconsidering projects or activities where that standard cannot be achieved; and
- when providing finance to Indigenous groups, ensuring decisions align with the principle of free, prior and informed consent.

7.1.5 Leadership partnerships

Financial institutions operate as part of a financial system that involves many participants, including governments, regulators, households and businesses. The success of an individual financial institution derives from the system within which it operates. There are many benefits of financial system participants working in partnership. Through collaboration there is an opportunity to open up new, and to better manage existing, products, services and markets that can serve households and businesses. The interconnectedness of the financial system means that there is also an opportunity to deliver improved environmental, social and economic outcomes. A key theme of ASFI's work is the need to establish formal structures that institutionalise collaborative practices across the financial system in a manner consistent with legal obligations (including competition law).

COP26:

With the UN Climate Change Conference (UNFCCC COP 26) rescheduled to take place from 1 to 12 November 2021, in Glasgow, UK, coupled with current discussions between the Australian and UK governments, there is an opportunity to explore the development of a sustainable finance partnership with the UK.

New Zealand's Sustainable Finance Forum (The Aotearoa Circle):

ASFI has established a practical working relationship with New Zealand's Sustainable Finance Forum (The Aotearoa Circle) that could form the basis of a partnership. There is an opportunity for Australia to demonstrate leadership across the Asia-Pacific region around sustainable finance. Supporting the development of sustainable finance practices amongst Pacific Island countries is specifically noted.

Asia-Pacific region:

Impact Investing Australia considers that Australia's financial system participants are well positioned to support the achievement of the SDGs across the Asia-Pacific, despite numerous challenges facing the region:[166]

- Seven million people die each year due to outdoor and indoor air pollution.
- Stunting due to malnutrition affects more than 96 million children.
- More than 18 million children were not enrolled in primary school in the past few years.
- Incidences of child marriage and early and forced marriage persist, with 20–25% of women in some countries married before they were 18.
- Eighty to ninety per cent of the wastewater generated in the region's developing countries was discharged directly into water bodies without any treatment (as of 2015).
- A total 1.5 billion people do not have access to improved sanitation and 417 million people are without access to electricity.

The Australian Government's Department of Foreign Affairs and Trade (DFAT) *Partnerships for Recovery — Australia's COVID-19 Development Response*[167] acknowledges that the private sector will be an essential partner in economic recovery across the region, and that facilitating responsible business models, low-carbon development and greater value chain diversification will boost economic resilience in Australia and partner countries, and help protect against future economic shocks.

The Australian Government's Business Partnerships Platform[168] is a notable example of public–private collaboration. The partnership, run by DFAT, supports businesses to create sustainable change in the region by creating and adapting products and services that improve lives, helping to create more inclusive and productive value chains, and expanding inclusive business practices.

Recommendation 8

Australia's financial system participants establish international partnerships to support the implementation of the Australian Sustainable Finance Roadmap.

7.2 Integrating sustainability into practice

7.2.1 Sustainable finance taxonomy

A core purpose of the financial system is to allocate capital to productive purposes for the benefit of all. There is an urgent need to shift new and existing capital into investments that create and better support sustainable and equitable outcomes for Australian people, our economy, the environment and investment and trade in the region.

A sustainable finance taxonomy – a body of common definitions for sustainable investment – which is aligned with the Paris Agreement and SDGs – is needed to: accelerate and scale up the flow of capital to sustainable outcomes; provide investors with confidence and assurance; and to enable comparability and reduce transaction costs.[169]

Many financial markets are moving towards establishing taxonomies for sustainable finance, or have already done so, including markets in the EU, Canada and China. In late 2019, the EU launched the International Platform for Sustainable Finance (IPSF) together with relevant public authorities of Argentina, Canada, Chile, China, India, Kenya and Morocco. Since its launch, Indonesia, New Zealand, Norway, Senegal, Singapore and Switzerland have also joined the IPSF. Together, the 14 members represent 50% of GHG emissions, 50% of the world population and 45% of global GDP.[173] The IPSF has established a working group on taxonomies, which will work towards a ‘Common Ground Taxonomy’ highlighting commonalities between taxonomies that have already been developed.[174]

The objective of developing, or adopting, a sustainable finance taxonomy should be to align and harmonise with emerging international sustainable finance taxonomies and to build on existing frameworks, while also reflecting the unique characteristics of the Australian market. A sustainable finance taxonomy would support the measurement of financial flows towards sustainable outcomes. Examples of financial system activities that would benefit from a sustainable finance taxonomy include:

- business lending decisions of banks;
- issuance of sustainability bonds by banks;
- assessment by ADIs of exposure of loan portfolios to sustainable investments;
- labelling of sustainable products;
- classifying sustainable activities for investment products subject to product disclosure requirements and for discrete investment mandates;
- development of concessional risk weightings for qualifying green and sustainable assets as part of capital treatment for ADIs;
- alignment of lending and investment portfolios to a trajectory of net zero emissions by 2050 through development of appropriate benchmarks that are aligned with a net zero emissions Australian economy. This could include joint work between the ASX and the ASFI Financial Risk and Sustainable Practices Forum to establish guidance for an evidence-based, Paris-aligned All Ordinaries ASX index that is informed by a 2050 net-zero-emissions trajectory; and
- investor engagement with investees in relation to their transition plans.[175]

CASE STUDY

Finance against slavery and trafficking

An example of a multi-party partnership is the Finance Against Slavery and Trafficking ’FAST’ Initiative, backed by DFAT, the governments of Liechtenstein and the Netherlands, United Nations University and private sector partners. The FAST initiative seeks to mobilise financial institutions to tackle modern slavery.

Globally, there were 40 million people in forced labour and forced marriage as of 2016.[170] Much modern slavery is a result of market failure: a failure to accurately price in the social costs of production. A recent IMF paper suggests child marriage costs countries around 1% of their GDP.[171] The first phase of the FAST Initiative involved a year-long consultation by a Financial Sector Commission, comprising 25 experts from finance, the anti-slavery movement and the business and human rights field. The Commission’s report, *Unlocking Potential: A Blueprint for Mobilizing Finance Against Slavery and Trafficking*, was released at the UN General Assembly in September 2019. The ‘FAST Blueprint’ – as the report is now known – proposes a collective action framework based on five goals and thirty actions. To aid in Blueprint implementation, the Commission also released a series of tools dealing with financial investigations, risk-mapping and good practice.[172] The second phase of work by the FAST Initiative involves implementation of the Blueprint, through a range of sector-led projects and initiatives including engagement by the FAST Initiative with 49 countries and international organisations involved in the Bali Process on People Smuggling, Trafficking in Persons, and Related Transnational Crime, to promote Blueprint implementation in relation to specific high-risk sectors.

The intended uses of a sustainable finance taxonomy would have implications for Australia's financial regulators APRA, ASIC and RBA. APRA could integrate a sustainable finance taxonomy into Prudential Practice Standards, Guidance and climate vulnerability assessments. ASIC could establish principles-based guidance on labelling that would support intermediaries to label and rate investment products, while the RBA could incorporate the taxonomy into risk weightings for ADIs. A sustainable finance taxonomy would also provide a reference for Australia's policy makers in the development of targets and strategies for achieving Australia's sustainable development commitments.[176]

To apply a sustainable finance taxonomy across Australia's financial system, it would be necessary to:

- determine the intended uses and users of a taxonomy in the Australian context;
- establish the objectives of a taxonomy and their goals, reviewing how the Paris Agreement and SDGs would be incorporated;
- establish the classification system to be used; and
- consider the consistency of a taxonomy with scenarios and pathways.

Significant work has been conducted to develop the EU sustainable finance taxonomy, which is based on EU's regulatory frameworks. Similarly, any taxonomy that is developed or adopted for Australia will need to align with Australian legal and regulatory frameworks, and be adaptable in order to respond to developments or innovations.

Given the depth of work that has been conducted globally on taxonomies, including the OECD's recent mapping of sustainable finance definitions and taxonomies across five jurisdictions,[177] the work required for Australia to implement a sustainable finance taxonomy could be achieved efficiently. The nature of prospective intended uses of a taxonomy means that it makes sense that a project focused on exploring the implementation of a taxonomy in a manner consistent with legal obligations (including competition law) should involve governments and financial regulators.

Recommendation 9

Australia's financial system participants establish a key project to explore the implementation of a sustainable finance taxonomy in Australia. The project should involve a broad group of key stakeholders, including civil society, asset owners, asset managers, banks, insurers, financial regulators, legal experts, industry experts, technology experts, sustainability experts, state governments, and the Australian Government.

Recommendation 10

Australia, through a relevant public authority, joins the International Platform on Sustainable Finance (IPSF) to enhance coordination and alignment with international sustainable finance initiatives, and to promote best practice in sustainable finance.

7.2.2 Climate-related financial disclosures

Australia's financial regulators (RBA, APRA and ASIC) have all highlighted the risk that climate change poses to Australia's financial system, with climate change considered a systemic or material risk that is "material, foreseeable and actionable now" and that will "rise over time, if not addressed."[178] As Mark Carney outlined in 2015 when he was Governor of the Bank of England, climate change poses three types of risk in relation to the financial system: physical, liability and transition.

- Physical risks arise from climate and weather-related events and impact asset valuations and insurance liabilities.
- Liability risks arise where those who have suffered loss or damage from the effects of climate change seek compensation from those they hold responsible. The Grantham Research Institute on Climate Change and the Environment (Grantham Institute) has identified around 1,500 climate change-related court cases globally.[179]
- Transition risks are financial risks that relate to the transition to a lower-carbon economy and may include policy, legal, technology and market changes to address mitigation and adaptation requirements.

According to the Grantham Institute, there are more than 2,000 climate laws and policies globally and "[t]here is now no country in the world that does not have at least one policy dealing with climate change", with the median being eight.[180] In a speech delivered in early 2019, Deputy Governor of the RBA, Dr Guy Debelle, emphasised that an orderly transition to a lower carbon economy would create better outcomes for Australia's economy and financial stability than a disorderly and abrupt transition.[181]

The TCFD recommendations, published in 2017, provide a framework for disclosing "clear, comparable and consistent information about the risks and opportunities presented by climate change."[182] They were developed to "promote more informed investment, credit, and insurance underwriting decisions" that, in turn, "would enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks." The TCFD recommendations encourage disclosure of forward-looking information through scenario analysis to enable users to understand the potential impact of different scenarios on the company's businesses, strategy and financial planning.[183]

Australian financial institutions worked with the UNEP FI on its TCFD pilot program, which considered the implementation of the TCFD recommendations for banks, and worked to develop "transition and physical assessment models and metrics to enable scenario-based, forward-looking assessment and disclosure of climate-related risks and opportunities."[184] Institutions have been working since inception of the TCFD on understanding what data is required and how to view investment portfolios through long-term climate risk-related lenses, and have reported against TCFD recommendations for several years, with enhanced reporting each year. According to the Australian Council of Superannuation Investors, as at August 2019, 52 ASX200 companies had either adopted or had committed to adopt TCFD in 2019.[185]

CMSI, an industry-led collaboration between insurers, banks, scientists, regulators, reporting standard professionals, service providers and supporting parties, has been established with the objective of (among other things) providing consistent and comparable financial disclosure guidelines under the TCFD recommendations for producers and users of such guidelines. CMSI has recently completed the first phase of its work, which involved publishing financial disclosure guidelines for Australian banks, general insurers and asset owners on scenario analysis of climate-related physical risk for buildings and infrastructure.[186]

Adopting TCFD disclosures supports international comparability. As disclosures become mandatory in other jurisdictions, such as in the EU, UK and New Zealand, as called for by the NGFS and as required by the Principles for Responsible Investment, it is expected that more companies will report according to the TCFD recommendations. TCFD provides an effective tool for boards seeking to assess long-term risk and shape long-term strategy. If used effectively, TCFD-aligned disclosures have the potential to promote a reallocation of capital towards industries that will be critical to delivering on Australia's commitments under the Paris Agreement and the achievement of net zero emissions by 2050.

To ensure that TCFD-aligned disclosures are 'decision-useful', companies should:

- consider the potential impact of climate change and disclose material findings;
- include the potential financial impact of climate-related issues on the business; and
- consider disclosing the resilience of company strategies to climate change.

Climate-related issues should also be mainstreamed within organisations through executive management and the risk management and finance departments, not just sustainability or corporate responsibility functions.[187]

Reporting aligned with TCFD recommendations by unlisted entities (with annual consolidated revenue of more than $100 million) and government entities would enhance the ability to assess the scale of risk that climate change poses to the Australian economy, particularly if all TCFD reporting was to be made publicly available via a central repository. Of note, company disclosure on climate change is a precursor for key elements of climate-related investment analysis and therefore reporting by unlisted entities would better enable investors to report in accordance with TCFD recommendations. APRA is proposing to issue guidance on climate change financial risk and it would be beneficial for this to include guidance on reporting according to TCFD.

There will be challenges that need to be addressed in moving towards mainstream adoption of the TCFD recommendations. These include the potential for divergent scenario adoption, which would hinder comparability. The development of skills at all levels of financial institutions would be needed. To support TCFD-aligned disclosures, there is an opportunity to form partnerships to share underlying data sets with organisations such as CSIRO.

The Australian Accounting Standards Board and Auditing and Assurance Standards Board have produced guidance on climate-related and other emerging risks disclosures.[188] The guidance reinforces that report preparers, assurers and auditors must approach climate change-related issues with the same degree of rigour as any other financial variable. A failure to do so may leave corporations and their directors increasingly exposed to claims for breach of duty and/or misleading disclosure under the Corporations Act.

Recommendation 11

Financial institutions with annual consolidated revenue of more than $100 million report according to the TCFD recommendations by 2023 on an 'if not, why not' basis.

Recommendation 12

All Australian Securities Exchange (ASX) listed companies, beginning with the ASX 300, report according to the TCFD recommendations by 2023 on an 'if not, why not' basis, and guidance is developed for ASX listed entities to support TCFD-aligned reporting.

Recommendation 13

ASFI, together with CMSI and other stakeholders, develops guidance to support TCFD-aligned reporting by financial institutions and facilitates discussion on how these reporting practices can be developed and implemented.

7.2.3 Nature-related financial disclosures

The Task Force on Nature-related Financial Disclosures (TNFD) launched in July 2020. The TNFD plans to develop a reporting framework over the next two years that will enable financial institutions to better understand their "risks, dependencies and impacts on nature."[189] The intention is that the TNFD operate alongside the TCFD and that it takes a wider approach to nature-related risk than the TCFD, which focuses on carbon.

Recommendation 14
Recognising that between 7 and 10 per cent of all species on Earth occur in Australia,[190] and many of these are only found in Australia,[191] Australia's financial system participants collectively play a leadership role in the development of the Task Force on Nature-related Financial Disclosures (TNFD) by:

- funding research that supports TNFD's working groups;
- engaging in the process to develop the TNFD reporting framework; and
- establishing, through ASFI, an Australian project to develop guidance for nature-related financial disclosures aligned to Australia's biodiversity challenges.

7.2.4 Sustainability disclosures

The purpose of sustainability reports and their assurance is that readers of reports can understand the organisation's impact on others (society and the environment) and/or the impact of (financially material to the organisation) environmental and social factors on the value of the organisation.

Sustainability disclosure is an evolving field of practice. As the five major standard-setting Institutions, CDP, CDSB, GRI, IIRC and SASB, acknowledge,[192] sustainability disclosure is necessarily more complex than financial reporting for several reasons:

- Some users of sustainability information, such as providers of financial capital, share the same primary objective as users of financial information – namely to make economic decisions. However, there is a variety of other users and therefore objectives of sustainability information. It is important that a company recognises this when determining which sustainability topics to disclose performance on, as well as in the choice of communication channels.
- The nature of sustainability topics, including their interest to different types of users of information and their influence on companies' performance, can also change, sometimes slowly but sometimes rapidly – a concept referred to as 'dynamic materiality'.
- There is a common misperception that conflates sustainability information with the expanding ecosystem of related ratings, indices and analytical tools, which rely on its disclosure.

The need for convergence of sustainability disclosure regimes is being recognised globally, with the five major standard setters stating:

> *Reported information is most useful when it is consistent across time periods, comparable across companies and geographies, and reliable (i.e., it is prepared subject to strong systems of internal control, board governance and oversight, and is assurable). It is also most useful when it is fit for the purpose of both businesses and users of their information, as determined through independent, rigorous and ongoing stakeholder consultation and refinement.*[193]

Assurance of sustainability reporting is particularly important. Evidence suggests that a high proportion of entities already assure their sustainability reports. Three-quarters of the 4,900 companies studied in KPMG's 2017 global reporting survey issued sustainability reports, with assurance having increased.[194] The majority of reports listed on GRI's Sustainability Disclosure Database indicate some form of external assurance.[195]

National and international standards and frameworks exist for assuring non-financial/sustainability disclosures.[196] However, sustainability reporting and assurance on sustainability reports remains voluntary and companies retain the right to decide whether or not to employ independent third parties to provide assurance on their sustainability reports. Further, companies that do have their reports assured by an independent third party have flexibility in the choice of the assurer, scope and level of assurance. Variation in approaches to assurance can result in variability in the materiality, credibility and completeness of information disclosed and make comparison of the same company's performance from year-to-year, or between companies, difficult, thereby reducing the overall value of such disclosures to inform investment, lending and insurance decisions.

The importance of narrative disclosures in an operating and financial review is noted. Financial reports are presented alongside narrative disclosures chiefly in the form of the directors' report.[197] There is an opportunity for operating and financial reviews to more closely align with, or draw from, allied disclosure frameworks.[198]

Recommendation 15
Sustainability reporting and assurance is mandated for listed entities and for unlisted assets wholly owned by financial institutions.

Australia's financial system participants, including financial institutions, businesses, governments and regulators, work to align with international developments, noting the evolving discussions around convergence of global disclosure frameworks and, in particular, the commitment by CDP, CDSB, GRI, IIRC and SASB to work together towards Comprehensive Corporate Reporting.

7.2.5 Vulnerability and stress testing

Stress tests are a well understood and proven tool for assessing the vulnerability and resilience of the financial system and financial institutions to systemic, macro-economic shocks. They have been used regularly by financial regulators across the globe, including by APRA in Australia, for example its pandemic stress test on the insurance industry in 2006[199] and various stress tests on the banking industry in recent years.

It is widely recognised that the effects of a changing climate pose financial risks to financial institutions, and central banks and financial regulators around the world, including in Australia, have highlighted the importance of understanding and managing the financial risks of climate change.[200]

Recent research commissioned by CPA Australia[201] argues that "given the range and complexity of uncertainty of potential climate futures and market responses in the transition to net zero, including in the short term, it is foreseeable that assumptions relating to the impacts of climate change may have a significant risk of material adjustment to carrying values within the next financial year, in which case they must be disclosed under AASB 101 / IAS 1. High levels of uncertainty may warrant the disclosure of sensitivity analysis, such as scenario testing".

Modelling the full extent of climate-related financial risk is complex and challenging, in part due to the distinctive characteristics of climate change, which include its far-reaching impact across the economy, the foreseeable nature – that is, a high degree of certainty that physical and transition risks will materialise at some point, its irreversibility, and that short-term actions will ultimately determine the magnitude and nature of future impacts.[202]

There are several methods for implementing climate-related stress tests for financial institutions. The first is a regulated approach that is mandated and administered by the financial regulator, which would require all large banks, insurance firms and potentially superannuation funds to conduct a consistent stress test for the industry. This approach can be used to assess the resilience of different entities, different sectors (e.g. insurance, banking, investment) or the resilience of the sector as a whole, as all major institutions within the sector would be required to conduct the stress test. Under this approach, there may also be some standardisation of scenario parameters used by the respective regulated entity types. APRA has announced that it will be undertaking climate change financial risk vulnerability assessments beginning with the largest banks, with other industries to follow. These assessments will be designed to estimate the potential physical and transition risks of climate change on the relevant entity's balance sheet.

The second is a voluntary standard that the industry can use and adopt for its own reporting. This could be administered by a co-regulatory or peak body representing members from the financial sector. This type of standard would make sure that consistent methods and approaches are applied across the sector. The benefits of this approach are its flexibility and its ability to collect, consolidate and share data across the industry in a transparent way in a manner consistent with legal obligations (including competition law).

The third type of stress test involves individual entities producing their own stress tests based on their own internal research and processes. Materials and methods can be developed to support financial institution best practice. However, how an institution ultimately implements the stress test would be up to them. Publishing of these stress tests would be voluntary and the decision of each individual institution. A coherent assessment of resilience across the sector to climate-related risks would not be possible under this implementation strategy as the stress tests would not be consistent.

ASFI notes that the TCFD is forming an advisory group to assist in developing practical guidance on climate-related scenario analysis.[203] TCFD guidance will target companies that are in the early stages of implementing scenario analysis, and will cover:

- scenario concepts and processes;
- how business-relevant scenarios can be constructed;
- how scenarios can help to identify company-relevant climate-related risks and opportunities;
- how scenarios can inform strategic planning regarding different potential impacts from climate change; and
- disclosure considerations to demonstrate strategy resilience across scenarios, including financial implications.

Recommendation 16
Financial institutions to undertake scenario analysis and stress test the resilience of their organisation to physical and transition risks from climate change.

To support this, the industry creates a bottom up, industry-led stress-testing framework that includes processes, frameworks, data and tools sufficient for an organisation to stress test its business. This would include information about what organisations are expected to report against and access to generic data and tools for stress testing, including from the Bureau of Meteorology and CSIRO, and environmental data held by government departments. This work should build on CMSI's current work to develop physical climate risk stress tests, which could potentially fall into this category.

Over time, scenario analysis and stress tests are expanded to include other sustainability-related impacts, for example, biodiversity loss.

Guidance should be developed on best practice approaches to conducting stress tests that is relevant for financial institutions of different sizes. Once established, ASFI's Financial Risk and Sustainable Practices Forum would provide a mechanism for discussion on the development and implementation of stress-testing practices as well as scenario analysis and climate modelling.

Recommendation 17
Vulnerability assessments to be undertaken or planned by APRA are expanded to include fit-for-purpose assessments for small and medium financial institutions across Australia, as well as the superannuation and insurance sectors.

7.2.6 Climate and sustainability services

Externalities are frequently excluded from financial decision-making and valuation. Financial and economic models undervalue natural and human capital such as air quality, river systems, soil quality, community volunteering, productive workforces, biodiversity, a healthy society, training and education. These externalities (or public goods) are frequently undervalued or not reflected in the balance sheets of businesses and governments despite the critical role they play in underpinning a prosperous and healthy economy. From a financial risk perspective, both the use of natural capital by an organisation in its operations, and the impact of an organisation on natural capital, is particularly important for Australia given its reliance on natural capital and vulnerability to climate change risks.

Financial institutions make decisions based on the ability to accurately assess and price risks, which is based on historical data. If past experience is no longer a reliable guide to the future, then there is a need to develop new models to support decision-making. Limitations with existing valuation tools, mainstream practices and lack of quality data challenge the sector in being able to respond to the new risks and opportunities presented by climate change and environmental and social issues.

In the context of the recent bushfires, there is a need for a broader, coherent and authoritative assessment of the nation's stock of assets, with the fires causing significant losses in natural capital, severe strains on social capital, challenges for human capital and clear economic losses. Australia's financial system requires accurate and timely information to properly price climate risk and reward climate innovation, and that information needs to be standardised to enable consistent valuation and more informed decision-making and choices.

Federal, state and local governments collectively have access to deep data sets that could better inform financial institution decision-making if made available. There is a need to progressively build trusted and accessible datasets in areas including soil, water, human capital and gender diversity. Building balance sheet and non-balance sheet indicators at investment level that are tied to jurisdiction and national balance sheets through the use of common data standards and concepts is a robust way to develop financial products including bonds and, most importantly, to assess their performance over time. The common data and standards, consistent with legal obligations (including competition laws), provide an independent and authoritative comparison point that can underpin the development of markets.

There is merit in establishing an industry agnostic repository of sustainability data that would include company sustainability reports. Submitted data that was publicly available prior to the establishment of the repository could remain publicly available on a repository for all users. Data not previously disclosed may be made publicly available by choice of the submitter. The rapid development of digital applications including big data and fintech provide opportunities to establish repositories of data that can be shared across the financial system, thus reducing the cost of implementation and extending reach.

Partnerships with government provide an opportunity for data to support delivery of economic, social and environmental outcomes. Private and public sector collaboration is required to progressively build commonly agreed, trusted and accessible data sets suitable for decision-making. These should be developed following discussion with decision-makers such that the choices are aligned with current areas of concern and that measurement can be designed with operational integration in mind. This action should be co-ordinated across public and private sectors to ensure alignment in the development of relevant standards and guidance. The involvement of organisations such as ASIC, APRA, the Australian Institute of Company Directors (AICD) and accounting standards bodies together with technical agencies such as ABS, CSIRO and relevant UN agencies, will be essential.

Recommendation 18
Environmental and social externalities are valued by financial institutions. To support this, Australia's financial system participants help to compile national- and state-level data sets by developing general principles and guidance to allow financial system participants to measure and assess multiple capitals including soil, water, education levels and gender diversity. Guidance would address how common metrics can be integrated into investment decisions and risk analysis, including, for example, determining impacts and dependencies, and materiality.

CASE STUDY

Environmental economic accounting

As an example of an initiative to build information disclosure, the Australian Government's Department of Agriculture, Water and the Environment has developed an Environmental Economic Accounting Strategy and Action plan.[204] The strategy recognises that "Australia's natural environment is fundamental to our economic prosperity and quality of life". Outcomes that are anticipated from the strategy include that the environmental, economic and social return on investments in the environment are demonstrated and the condition of environmental assets and their contribution to prosperity and wellbeing is fully integrated with measures of social and economic activity.

The System of Environmental Economic Accounting (SEEA) is an international framework for capturing and organising information on the environment, including its contribution to economic activity and the impact of economic activity on the environment. It is based on internationally agreed accounting concepts to gather and organise information in a consistent manner that enables integration with socioeconomic information such as National Accounts and employment data.

The Department of Agriculture, Water and the Environment's Environmental Economic Accounting strategy sets out a common national approach to environmental economic accounting that will consist of adopting the SEEA framework for environmental economic accounting with a focus on a nationally consistent implementation of the framework. A common national approach will provide agreed common principles for doing this in Australia rather than setting out prescriptive requirements for account development.

The strategy recommends a core set of national environmental economic accounts is established.

These will build on existing national-scale environmental accounts, including emissions and water accounts and the ABS experimental environmental economic account products.[205]

7.2.7 Working with financial services regulators

Critical to the success of the implementation of the Roadmap is the role of the financial services regulators. They need to balance their role as regulators while forming practical working relationships with financial institutions to secure change. Australia's Council of Financial Regulators, while not a formal statutory body, plays an important role in coordinating the activities of financial services regulators.

Australian financial services regulators have a strong track record working with financial institutions. This is reflected in the role that APRA and ASIC have played as Observers to the ASFI Steering Committee. Through the establishment of ASFI's Financial Risk and Sustainable Practices Forum, Sustainable Finance Markets Forum and Leadership Forum, there is an opportunity to establish a practical cross-sectoral structure that facilitates collaboration with Australia's financial services regulators.

Through ASFI's deliberations, the ASFI technical working group identified a range of issues that will require further engagement with financial services regulators. Many of the areas identified are already the subject of reviews by APRA and ASIC that have been delayed by Covid-19. Areas of engagement with APRA include:

- embedding sustainability into Draft Prudential Standard CPS 511 (Remuneration), specifically with regards to the matters to be incorporated into the design of variable remuneration arrangements (Remuneration);
- referencing sustainability risks in Prudential Standards CSP510 and SPS510 (Governance) in the sections detailing the skills, knowledge and experience that are required by the Board and senior management, collectively;
- incorporating sustainability risks in the list of material risks in Prudential Standards 220 and SPS 220 (Risk Management);
- as part of APRA's planned updates to Prudential Guidance SPG530 (Investment Governance):
  - — recognising that a registrable superannuation entity (RSE) licensee may incorporate into investment strategies: members' views on environmental and social issues, and ethical, themed or impact investments;
  - — stating that it would be expected that material sustainability factors would be systematically and explicitly integrated into an RSE licensee's investment strategy, analysis and decision-making;
  - — recognising that the process and criteria for selecting an investment may continue to include the investment's impact, provided the investment is consistent with the fund's investment strategy where the investment is made for a retirement purpose;
  - — removing the reference in clause 35 to quantification of ESG considerations and removing clause 36;

  - referencing sustainability risk as a potential risk factor to be considered in the assessment of risk exposures for an investment when conducting due diligence; and
  - referencing consideration of an investment manager's approach to identifying and managing sustainability risk factors as part of the due diligence assessment prior to selecting an investment manager;
- continuing to recognise that 'incidental advantages' of investments remain permitted, and updating and broadening the list of incidental advantages in clause 35 of Superannuation Circular No.III.A.4 (Sole Purpose Test Guidance) to include investments that deliver positive environmental and/or social impacts;
- including sustainability risks within capital requirements for regulated institutions (Prudential Standards APS110 and GPS110 – Capital Adequacy) and working with industry to develop a practical approach to measurement of sustainability risk; and
- including guidance on reporting according to TCFD in APRA's proposed guidance on climate change.

Recommendation 19

Financial institutions work with Australia's financial system regulators on an ongoing basis to embed sustainability into regulatory guidance and standards to drive system-wide practice. ASFI's Financial Risk and Sustainable Practices Forum provides a mechanism for collaboration between financial regulators, financial institutions and stakeholders.

7.2.8 Encouraging sustainable practices

The size and scope of Australia's financial system means that the practices of financial institutions influence the behaviour and practices of individuals and organisations. There is an opportunity for financial institutions to benefit the whole of the Australian economy and society:

- through their outsourcing and procurement practices;
- by encouraging sustainable practices of clients;
- by raising awareness of ESG issues, including through longer-term research;
- by supporting clients to manage ESG risks and developing solutions; and
- by enabling activities that promote sustainable solutions and outcomes.

These actions are consistent with commitments being made by signatories to the Principles for Responsible Banking and Principles for Sustainable Insurance.

Recommendation 20

Australia's financial system participants positively drive best practice for the benefit of the whole of the Australian economy and society, including by:

- embedding sustainability into outsourcing and procurement practices; and
- embedding sustainability information into products and services for households and businesses.

7.2.9 Stewardship practices

The establishment of stewardship codes across the Australian financial system is recommended as a mechanism that can enable financial institutions to harmonise and enhance their stewardship practices across their respective sectors to support the:

- transition of the Australian economy to net zero emissions by 2050;
- delivery of the SDGs, including commitments to the Paris Agreement, Sendai Framework and Convention on Biological Diversity; and
- implementation of the UN Guiding Principles on Business and Human Rights.

Development of stewardship codes has most recently focused on specific sections of the financial system, such as the relationship between fiduciary investors and investment managers. Examples include the Australian Council of Superannuation Investors' asset owner stewardship code[206] and the Financial Services Council's principles of internal governance and asset stewardship.[207] A key objective of stewardship codes would be to institutionalise collaborative practices across the whole of the financial system and establish clear benchmarks for performance. Codes would recognise, and build on, the involvement of financial system participants in international collaborative initiatives, for example the Principles for Responsible Banking, Principles for Sustainable Insurance and Principles for Responsible Investment. A code would not seek to compete but harmonise with existing sector codes.

A key principle of stewardship codes across the Australian financial system would be the publication by financial institutions of an annual stewardship statement that would articulate how the institution implements sustainability.

Recommendation 21

Australia's financial system participants develop stewardship codes to harmonise and enhance stewardship practices.

7.3 Enabling resilience for all Australians

7.3.1 Financial resilience

Summer bushfires and Covid-19 have demonstrated how vulnerable Australians are to acute shocks. While Australia has well-established welfare arrangements for old age, unemployment and health, the same provisions do not exist to support individuals through traumatic events.

Domestic violence and refugees are examples of where there is a need to support individual financial resilience.

According to the ABS 2016 Personal Safety Survey, 2.2 million Australians have experienced physical and/or sexual violence from a partner and 3.6 million Australians have experienced emotional abuse from a partner. About 2.2 million Australians have experienced sexual violence since the age of 15.[208] Mission Australia cites domestic and family violence as the main reason why 80,000 people asked for help from specialist homelessness services in 2018–19.[209]

According to Red Cross Australia, while in 2017, Australia assisted 23,111 refugees to settle, the majority of people seeking asylum living in the community do so with access to few resources and almost no possessions.[210]

Australians living in poverty are also subject to a 'poverty premium', which refers to the cost of paying higher prices for products than middle-class consumers do.[211] Examples across the financial system of the cost of a poverty premium include lower interest rates for small account balances on bank deposits, the cost of the inability to receive discounts for pre-payment of insurance premiums and higher investment management fees for small investments.

Income and revenue contingent loans

Income contingent loans (ICLs) are identified as a mechanism to support individual resilience. ICLs are typically used to alleviate credit constraints for those facing tuition costs. An example is the Higher Education Contributions Scheme (HECS). The salient advantage of ICL schemes over alternative funding sources is the absence of default events that can have lifetime impacts on individuals who are subsequently unable to access credit. ICL schemes can be designed to link repayments to level of income, which can be verified through the Australian Taxation Office (ATO). The benefit of ICL schemes for education has been to reduce the impact of risk aversion on the participation decision. Proponents have argued that ICL schemes can be used in a variety of applications, including revenue contingent loans (RCL) for farmers and small businesses.

It is proposed that financial system participants introduce an ICL/RCL management system similar to HECS that would offer access to finance of up to $3,000 for the purpose of financing basic items for individuals who are managing crisis events. ICLs could be made available to vulnerable groups, including victims of domestic violence and refugees. When loans are paid back, this would be formally acknowledged in an individual's credit score and thus bring them into mainstream finance. The establishment of ICL/RCL schemes has the potential to significantly reduce reliance on payday loans and fringe credit, and reduce negative consequences that arise from default.

RCL schemes could be developed to provide small loans to social enterprises. With support from a partner such as local government, larger size loans could be made to community projects, including to upgrade community facilities. These activities have broader benefits such as building and supporting community well-being and creating jobs.

Place-based resilience investments

The process of recovery from Covid-19, bushfires, floods and droughts needs to be rapid and have real impact at the national, regional and local level. This will require a horizontally and vertically distributed and deliberative model of economic recovery. Central to this model are place-based recovery strategies, which simultaneously respond to and engage the nuances of 'place' and local communities while being aggregated across a regional scale to maximise the investment footholds required by private and institutional investors.

A key component of a successful place-based recovery strategy is community participation. At the heart of all successful place-based partnerships are engaged and informed communities. Effective coalitions or partnerships between key stakeholders are vital if impact is to be successful. Place-based interventions require investment in community infrastructure from multiple sources, including private sector funding. Rigorous measurement and evaluation of outcomes/impact (both program and population data) need to be built into the business from the start.

This distributed deliberative recovery model has two macro indicators of success: firstly, short- to medium-term recovery that kick-starts key local and regional supply chains, and secondly, long-term resilience, which means that future shocks are substantially less capable of disempowering our social systems. Sitting at the heart of a distributed deliberative recovery model are place-based partnerships (SDG17). These are best described as business undertakings that require a convergence of public, private and civil sector interests, expertise, resourcing and financing.

Arguably the most critical stakeholder in this is local government. As it stands, local government is a wholly untapped partner-resource in the creation of new aggregated and place-based SDG markets and the delivery of sustainable development outcomes at scale. The current crisis induced by Covid-19 only reinforces the vital role that local government must play in the recovery of society.

It is proposed that financial system participants design and establish finance facilities that can be accessed by place-based groups, including clubs and social enterprises, through local government partners. Examples of previous financial system innovations include the Municipal Association of Victoria's Local Government Funding Vehicle[212] that was established in 2014 and enabled 33 councils to access cheaper sources of funding following the GFC.

As part of a partnership approach, local authorities would need to confirm clear local economic recovery priorities and investment opportunities, including social procurement, redesign service procurement processes to enable the identification and building of place-based partnerships, and design integrated business planning models that enable convergence and the establishment of social enterprises. Local authorities have the opportunity to become brokers and drive alliances between profit-for-purpose/not-for-profit /profit-only businesses and investors to ensure agency exists to deliver specific social and environment impact outcomes.

Recommendation 22
Australia's financial system participants support the establishment of community finance that can be accessed by place-based groups, including clubs and social enterprises, as part of a place-based community resilience strategy. This should include collaborative initiatives with local government partners, development of standardised documentation that can reduce the costs for social enterprises to access finance, and support for credit guarantees and other measures that reduce the risk of financing and investing.

Recommendation 23
Australia's financial system participants develop income and revenue contingent loans as a mechanism to support individual and community resilience to acute shocks as well as chronic threats to climate and health, which amplify the impact of acute shocks on the most vulnerable.

7.3.2 Financial inclusion

There is an urgent need to build societal resilience to acute shocks, as well as chronic threats to climate and health, which amplify the impact of acute shocks on the most vulnerable. It is not a question of 'if' or even 'when' but whether we are in a more resilient social and economic position to respond to and/or mitigate future threats. The leadership role of financial institutions cannot be overstated, nor can the urgency with which they now need to partner with government and civil society to re-build and shock-proof the social and economic system.

Financial institutions have long grappled with the challenge of how not to exclude people on the basis of insufficient income, creditworthiness, or inability to understand products and services. Financial exclusion places people and their families at risk of financial hardship. This can lead to poverty, vulnerability to predatory lending practices, and poor social, emotional and health outcomes. The Covid-19 crisis has further exacerbated this situation, with the number of financially vulnerable Australians significantly increasing as a result of job losses being felt across the economy. While financial institutions have made significant efforts to support customers through Covid-19, those without credit have found it difficult to access funds. There is a risk that a lack of access to financial services will, in the current environment, drive more consumers to high-cost and/or predatory financial products.

To better leverage innovation, there is a need to address existing barriers between for-profit and charity to be able to support blended and mission-driven organisations to scale. Revenue-generating not-for-profits may be refused access to some of the benefits traditionally available to charities, such as Deductible Gift Recipient status, which is essential for many philanthropic donations. In addition, not-for-profits are only able to access debt financing, not equity, due to their inability to distribute profits. Many not-for-profits are not comfortable with debt, and thus growth is confined to philanthropy and government funding.

Financial inclusion, defined as the access by individuals and businesses to "useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way,"[213] is a target in 8 of the 17 SDGs, namely: SDG1, on eradicating poverty; SDG 2, on ending hunger, achieving food security and promoting sustainable agriculture; SDG 3, on promoting health and well-being; SDG 5, on achieving gender equality and economic empowerment of women; SDG 8, on promoting economic growth and jobs; SDG 9, on supporting industry, innovation and infrastructure; and SDG 10, on reducing inequalities. Additionally, in SDG 17, on strengthening the means of implementation there is an implicit role for better financial inclusion through greater savings mobilisation for investment and consumption that can spur growth.[214]

A Financial Inclusion Action Plan (FIAP) is an agreed strategy of practical actions that an organisation will undertake to improve financial inclusion in Australia. A FIAP provides an opportunity for an organisation to take real action to enable financial inclusion and resilience. Several financial institutions have, or are, establishing FIAPs.

Financial institutions should review their own practices, including their hardship provisions and policies, and the design of their products and services, to ensure financial inclusion.

There is a need to develop mechanisms for financial institutions to collaborate, share knowledge and build industry best practice including:

- reviewing impact of hardship provisions and policies across the financial system;
- integrating human rights considerations into practice through the adoption of common language incorporating the broader concept of human well-being;
- integrating consideration of an Australian-centric well-being framework into best practice (see Recommendation 30);
- incorporating the principle of free, prior and informed consent into decisions made by financial institutions (see Recommendation 7); and
- developing blended finance/risk-sharing solutions that increase accessibility/inclusion and reduce poverty premium.

Recommendation 24

Financial institutions establish Financial Inclusions Action Plans and review current practices and design of products and services to ensure financial inclusion.

Recommendation 25

Consistent with applicable laws and regulations, financial institutions measure and report on:

- financial distress for households to bring greater focus on individual impact and measures being taken by the institution to address financial vulnerability; and
- financial outcomes for Aboriginal and Torres Strait Islander customers. This would involve working in partnership with Indigenous peoples on the approach to measurement and evaluation of outcomes for Indigenous customers. The tools used to collect relevant data should be culturally appropriate.

CASE STUDY

Reconciliation Action Plans

Australian financial institutions have made progress in working effectively with Aboriginal and Torres Strait Islander peoples through Reconciliation Action Plan commitments. A growing number of Australian financial institutions have developed Reconciliation Action Plans, with several having launched their first plan more than a decade ago. These plans, which are often developed in partnership with Indigenous peoples, set out targeted actions the organisations will take to work effectively with Indigenous peoples and communities, and recognise the need for continuous improvement. Reconciliation Action Plan commitments or actions by Australian financial institutions include:

- employment, education and economic participation for Indigenous peoples;
- cultural awareness, learning and appreciation opportunities for employees;
- financial solutions designed to meet the needs of Indigenous peoples (including inclusive design and marketing);
- partnerships with Indigenous communities and organisations;
- commitments to free, prior and informed consent for project finance impacting Indigenous customers and communities;
- supporting the Uluru statement and Constitutional recognition;
- financial capability and well-being programs; and
- accessible banking products.

Financial institutions are working to support Indigenous peoples to achieve better financial outcomes. Initiatives include:

- the ‘access to fee-free ATM services for remote communities’ program coordinated by the Australian Banking Association;
- the Indigenous Superannuation Working Group coordinated by the Australian Institute for Superannuation Trustees, which is focused on improving superannuation outcomes for Indigenous people; and
- the Insurance Council of Australia’s recently announced plan to establish an Indigenous liaison forum, which will advise the insurance industry on “Indigenous-related issues and customer outcomes, support reconciliation actions, increase industry understanding of vulnerable customers and increase knowledge of specific cultural and heritage concerns”.[215]

7.3.3 **Financial capability**

An increasingly complex financial system makes financial decision-making a challenge for many Australians. Many Australians may not have the financial capability to interact meaningfully with their financial products and services.

With variable levels of financial capability across Australia, many people may find it difficult to articulate their expectations and interests. This transcends generations, ethnicity, gender and socio-economic backgrounds and can evolve over time as a person's circumstances change. There is a lack of understanding about what services are available to support financial decision-making and what to expect from service delivery, both from interacting with financial institutions and with other support services, including financial counselling.

While financial institutions have a role to play in developing financial capability for both customers and the community, it is a shared priority across government and the not-for-profit sector. As such, supporting national initiatives to coordinate this work is imperative. The 2018 National Financial Capability Strategy is an initiative of ASIC. It aims to support Australians to better manage money day-to-day, make informed money decisions, and plan for the future, to ultimately achieve the vision for all Australians to be in control of their financial lives. The strategy is delivered in partnership with government, business/industry, not-for-profit organisations and education providers. On 6 October 2020, the Australian Government announced that Treasury will lead a refocused national approach to financial capability.[216]

It is recommended that financial institutions collaborate with regulators and the Australian Government to build individual and community financial capability. Financial institutions can leverage the existing networks within the finance system to ensure that existing arrangements are delivering on-the-ground improvements and assisting those in the community that need it the most. Given the considerable investment by a range of disparate individual organisations developing and delivering financial education, literacy and resilience programs, there is an opportunity to consolidate these activities to reduce duplication and potentially enhance effectiveness through the creation of a single independently constituted program. This has the potential to expand coverage (both of topics covered and people reached), create capacity to measure the effectiveness of its activities, continually improve its approach, and research other areas that will contribute to behavioural change. Current research demonstrates that financial knowledge does not necessarily translate to changed or improved financial behaviours, suggesting that further work is needed to understand how to make it more effective and how it may work in concert with other levers, as relying on education alone is likely to be insufficient.

Recommendation 26
Financial institutions collaborate with regulators and the Australian Government to support networks, programs and initiatives that build individual and community financial capability.

7.3.4 **Financial decision-making**

Recent research by Responsible Investment Association Australasia has confirmed that consumer sentiment in support of investments that are consistent with people's own values is rising.[217] There has been a shift towards assessing financial providers on the outcomes they are responsible for, with four in five Australians wanting their super fund and their bank(s) to communicate the impacts their money is having on people and the planet. RIAA's research found that 86% of Australians expect their super or other investments, and 87% of Australians expect the money in their bank accounts, to be invested responsibly and ethically. In relation to financial advisers, RIAA's research found that 86% of Australians believe that it is important that their financial adviser asks them about their interests and values in relation to their investments.

In light of this demonstrated consumer interest in where savings and investments are being directed, it has become more critical that consumers can access good quality, reliable and comparable information on the approaches superannuation funds and managed investment products in particular are taking to considering sustainability and ethical issues, and that information provided meets the long-term needs of consumers, as well as the ability to 'look through' to the portfolio holdings of these investment products. Globally, efforts are underway to standardise disclosures around these sustainability issues via mandatory reporting or labelling schemes. In Australia, the Responsible Investment Association Australasia has developed a responsible investment labelling program that embeds high-level standards, transparency requirements and an assessment of the appropriateness of product names and descriptions to ensure products are true to label and delivering in a manner that is aligned with consumer expectations.

Rules requiring trustees of most superannuation entities to publicly disclose their portfolio holdings were legislated in Australia in 2012, however, there has been continued deferral of the first reporting date due to regulations regarding the content and format of disclosure not having been made. ASIC has indicated it will be deferring the first reporting date of 31 December 2020 again.

Recommendation 27
Australia's financial system participants support the development of labelling standards that provide consumers with access to consistent labelling and disclosure of the sustainability of financial services products to provide clarity to consumers on the quality of, and how sustainability is considered and managed within, products. The development of labelling standards should link to the implementation of a sustainability classification system (taxonomy).

Recommendation 28

Australia's financial system participants enable Australians to make financial decisions based on their values and sustainability preferences. This includes:

- ensuring financial advisers (human and robot), superannuation funds, accountants and platforms consider the sustainability preferences of consumers. The client fact-find process should be conducted in a way that is simple for consumers to understand and includes a standard set of sustainability preference questions;
- for ASIC to consider strengthening its Regulatory Guide 65 to facilitate meaningful disclosures on the extent to which product issuers disclose whether and how labour standards, environmental, social or ethical considerations are taken into account for investment products;
- for trustees of registrable superannuation entities and responsible entities of other publicly available funds to voluntarily disclose their portfolio holdings within 90 days of each half year;
- for financial institutions to collaborate and develop best practice guidelines for the disclosure of portfolio holdings by superannuation entities and other publicly available funds (in the absence of regulations being passed by the Australian Parliament); and
- for the Australian Parliament to pass regulations to prescribe the content and format of disclosure of portfolio holdings by superannuation entities.

7.3.5 Product design principles

To drive more ambitious sustainable and community-focused outcomes, financial institutions need to develop best practice principles, in a manner consistent with legal obligations (including competition law), to guide product design, delivery and disclosure. The principles should use inclusive and universal design movements and behavioural research as the foundation, and make sure there is a focus on the outcomes to be achieved, being greater financial well-being, resilience and inclusion, sustainability and improved community outcomes. The principles should be consistent with, and build on, the new design and distribution obligations for financial products that will come into effect in October 2021, and ASIC's proposed principles-based guidance.[218]

There is a lack of guidance on what good and great product design, delivery and disclosure looks like for both financial institutions and consumers. Being able to articulate what these are in a concise and inclusive manner will enable greater discretion by consumers and provide a standard for the industry. Having a financial well-being/resilience/inclusion lens as well as a sustainability lens would ensure that there was consideration of the environmental and social impacts of products and services. Consumers should be able to identify products and services that are good for their financial well-being and for people and the planet.

By using inclusive and universal design, principles would aim to deliver the best possible outcomes for all consumers. Universal design aims to make sure all products and services can serve as broad a population as possible; inclusive design aims to make sure that products and services consider the uniqueness and diversity through 'one-size-fit-one' approaches. The product design principles could include insights from behavioural economics, including how to use nudges towards improving financial health/well-being and remove friction that prevents consumers reaching desired outcomes. A practical example is that design principles could encourage credit card providers to make it easy for consumers to automatically pay off their credit card each month, encourage financial organisations to automatically roll customers' term deposits into the best available rate for the equivalent term, and automatically notify customers of various financial products if a better option becomes available. The opposite should apply for undesirable behaviour, for example, by encouraging product providers to avoid defaulting consumers into high-cost accounts.

The adoption of design and distribution principles by financial institutions can support the establishment of new practices across the financial system, including:

- reviewing credit criteria/algorithms to assess impact on financial inclusion;
- supporting employers to provide real-time information on payment of superannuation to their employees;
- reviewing basic products to ensure they meet the needs of vulnerable people;
- reporting by financial institutions on the number of people adversely affected/impacted by circumstances;
- supporting automatic referral of vulnerable clients to financial counsellors, and victims of domestic violence to financial support and crisis payments services; and
- designing products and services that do not hard wire a poverty premium.

Recommendation 29

Australia's financial system participants collaborate, through ASFI, to develop best practice principles to guide product design, delivery and disclosure to drive sustainable and community-focused outcomes.

7.3.6 Well-being framework

It is critical for the financial system to shift focus from human rights to broader human well-being, including the influence the broad reach of the sector has across the domestic and global economies.

The social issues that a sustainable financial system can impact both positively and negatively include equity, inclusion, casualisation of the workforce, fair and decent work, living wages, physical and mental health, and the social impacts of climate change. There is therefore a need to adopt a common lens through which to view the multitude of factors that influence human well-being and to consider how the operation of the financial system may impact those factors. A common, well-founded well-being framework would establish a foundation on which to address these issues.

Improved customer well-being is likely to result in better economic outcomes (including, for example fewer insurance claims) and associated financial benefits for both customers and their service providers. Conversely, where well-being is deficient, this can have serious implications for the ability of customers to access financial products and services, maintain their financial well-being and continue to service their obligations.

There is a disconnect between delivering investment returns and the broader social costs that individuals, families, communities, the government and universal owners bear. This is largely because the costs of the associated adverse impacts of corporate operations are externalised and are therefore not directly borne by those pursuing the profit. The pursuit of profit, if not executed responsibly and in a fair manner, impacts all levels of society and has the potential to impact the long-term sustainability of businesses. A prosperous society with high levels of well-being is good for business.

Business and investors are not incentivised to measure broader social costs. Examples include the social issues arising from gambling, and the casualisation of the workforce. In the investment or lending decision-making process, consideration is typically not given to the broader society-wide implications. The concern is that business tends to take an overly narrow view of its role in society when it comes to culture, ethics, accountability and purpose, because it does not directly bear the cost of the externalities of its operations and struggles to measure them (see further Recommendation 18 in relation to the valuation of externalities).

Ensuring that, at a national level, there is a focus on well-being, including mental health, living wage, equality and security of work, is particularly important given the risks posed by technology and automation.

Recommendation 30

Australia's financial system participants support the development and implementation of an Australian-focused well-being framework, informed by global thinking and based on New Zealand's 12 domains of well-being in its Living Standards Framework.

7.4 Building sustainable finance markets

7.4.1 Transition to net zero by 2050

Analysis by the Energy and Climate Intelligence Unit demonstrates that half of the world's economic output is now being generated in areas where there are now moves to cut carbon emissions to net zero by 2050.[219] As momentum towards net zero carbon emissions has built, meeting the Paris Agreement is now linked to the competitive position of sovereign nations. Where previously transition to a low-carbon economy may not have had the urgency it deserved, there is now a real Race to Zero.[220] In Australia, all states and territories are aiming to achieve net zero emissions by or before 2050. In addition, an increasing number of local governments and large businesses and investors in Australia are setting net zero emissions targets. The National Farmers' Federation recently announced its climate change policy stating it supports an economy-wide aspiration of net zero emissions by 2050.[221]

An example of the recognition of the role that governments can play in both leading transition and managing consequences of dislocation is the initiatives by the NSW Government to support clean energy through the placement of Renewable Energy Zones. NSW and Commonwealth governments are jointly funding more than $2 billion in energy and emissions reduction initiatives.[222] To capture these opportunities, the NSW Government has established an Electricity Strategy that sets out a plan to deliver three Renewable Energy Zones in the state's Central-West, New England and South-West regions[223] that are supported through AEMO's Integrated System Plan.

Recent modelling by ClimateWorks[224] demonstrates that there are multiple pathways by which Australia can achieve the Paris Agreement goal of limiting global warming to well below 2°C and as close as possible to 1.5°C. These are largely due to technological progress over the past five years that makes it possible to achieve net zero emissions in many sectors: electricity, buildings, transport, industry and agriculture/land.

The Australian Government's Technology Investment Roadmap[225] proposes a Technology Investment Framework that outlines the respective roles of the private sector and government, defining the role of the private sector as driving deployment of commercially mature technologies and the government to remove roadblocks, enable consumer choice and support the emergence of the best enabling environment. The Technology Investment Roadmap articulates that achieving large-scale deployment of technologies will also require a range of enabling technologies and activities including:

- smart meters, smart appliances, energy management systems and better sensors that allow consumers to make wiser choices about how they use energy and other carbon-intensive products;
- inverters, power conversion and demand management systems that allow every device that is connected to the electricity system to operate efficiently as part of an integrated system; and
- micro grids and stand-alone power systems that allow the long-distance transmission of renewable energy and provide remote and regional industries and communities with reliable, competitively priced energy.

Recommendation 31

Australia's financial institutions collaborate, through ASFI, to establish interim science-based targets and trajectories to align and facilitate the transition to net zero emissions by 2050. This will support individual financial institutions to make net-zero-aligned decisions on lending, insurance and investment.

➜*See also recommendations 32, 33 and 37 below.*

7.4.2 Sustainability capital markets

Incentivising sustainability bonds

Bond and loan markets are an important element of Australia's financial system. In order for financial institutions to increase capital allocation towards sustainability-linked assets, it is necessary to harmonise with international financial system regulations.

The RBA is a member of the BIS, an organisation based in Basel, Switzerland, that was established by central banks in 1930. BIS's main function is to support and promote financial stability.[226] BIS recently outlined its thinking in respect to the role central banks may play supporting climate change transition.[227] It stated that "[i]f being exposed to climate-related risks is seen as part of financial risks, then it might be appropriate to consider capital requirements to reflect such risks. In this respect, proposals have emerged in favour of either a 'green supporting factor' (which would reduce capital requirements for banks with lower exposure to climate-related risks) or a 'brown penalising factor', which would increase capital requirements for banks with higher exposure to exposed sectors". BIS argues "it is not obvious why being exposed to 'green' sectors would necessarily reduce non-climate-related financial risks, and thereby justify lower capital requirements".[228]

Considering mechanisms that could have the impact of incentivising financial institutions to allocate capital towards green and other sustainability-linked assets in a way that is consistent with international financial regulations, it is acknowledged that a Pillar 1 approach, whereby concessional risk weights are applied to qualifying green and other sustainability-linked assets, is likely to be challenging to implement. This is due to several identified roadblocks, including the current lack of quantifiable performance history demonstrating a reduction in credit risk for green or sustainable assets.

There is value in exploring an incentive model under a Pillar 2 approach as part of APRA's supervisory review process. Potentially, this incentive model could comprise an extension of APRA's proposed climate change financial risk vulnerability assessment. In this regard, it is acknowledged that APRA has expressed expectations that regulated entities consider climate change financial risks within pricing and risk management decisions where appropriate, and that regulated entities evaluate the impact of climate risks on their business operations and, where material, develop adequate policies, procedures and systems.

A key principle of an incentive model in the near term would be that, for so long as quantifiable performance history demonstrating a reduction in credit risk for green or sustainable assets is lacking, Level 2 (Consolidated Group) Risk Weighted Assets (RWA) and Total Capital are maintained at an overall neutral level. As one potential approach, pursuant to an ADI's Internal Capital Adequacy Assessment Process (ICAAP) under

Pillar 2, the ADI could classify its assets into three pools, being 'sustainable', 'neutral', and 'brown' (or some other nomenclature). The 'brown' asset pool would be attributed a scaling factor that would lead to an increase in calculated RWAs for the entire pool and the 'sustainable' asset pool would be eligible for a corresponding decrease in calculated RWAs for the entire pool.

In time, as quantifiable performance history demonstrating a reduction in credit risk for green or sustainable assets emerges, APRA could consider a further downward adjustment to Pillar 2 capital requirements and associated RWAs, such that Level 2 (Consolidated Group) RWAs and Total Capital are reduced reflective of the reduction in credit risk. This would further encourage the allocation of capital. Importantly, this incentive model would not necessitate material changes to the existing regulatory standards (i.e. Pillar 1) but could be incorporated into an ADI's existing ICAAP.

To incentivise financial institutions to increase capital allocation towards sustainability-linked assets it is proposed to build on the example implemented by the RBA during the GFC where, to enhance liquidity in the financial markets, the RBA expanded the range of eligible securities it would hold under repo agreements to include both residential mortgage-backed securities and asset-backed commercial paper issued by securitisers.

Some regulators have already broadened their universe of eligible collateral. The European Central Bank announced in September 2020 that Bonds with coupons linked to sustainability performance targets would become eligible as central bank collateral. The coupons must be linked to a performance target referring to one or more of the environmental objectives set out in the EU Taxonomy Regulation and/or to one or more of the SDGs relating to climate change or environmental degradation.[229] The People's Bank of China announced in 2018 that it would expand the range of eligible collateral for medium-term lending it accepts to include commercial banks' green bonds, green loans and asset-backed securities with a credit rating of AA and above.

In the Australian context, options identified include:

1. applying a reduced haircut to both high-quality liquid assets (HQLA) and Committed Liquidity Facility eligible securities that are issued in labelled green/sustainable debt format (or even applying an increased haircut to fossil fuel intensive asset securities). This could provide a forward signal that the RBA is keen to purchase green/sustainable assets to stimulate the development of the local market for green/sustainable debt securities and incentivise borrowers looking to raise debt in this format; and
2. expanding the RBA Committed Liquidity Facility eligible collateral criteria to include green/sustainable debt from a broader universe of issuers beyond AA-rated banks and sub-sovereign and agencies. Examples include highly rated corporates, universities and securitisation issuers who have, to date, had somewhat limited appetite to issue in green/sustainable format due to perceptions around illiquidity, additional costs and investor demand.

Should non-conventional monetary policy through Quantitative Easing be considered as a response to Covid-19, an option of including green/sustainability focused Quantitative Easing, notwithstanding or impacting on any credit quality requirements for such purchases, may also provide additional signaling and incentives for issuers and investors in such securities. This would address concerns raised by some investors around perceived illiquidity concerns with sustainability-themed (labelled green/social/sustainability) bonds, though this has been gradually addressed as more liquid and benchmark issues come to market, as shown by the recent semi issuance of $1.8 billion green and $1.8 billion sustainability bonds by NSW TCorp and $1.25 billion green bond by Queensland Treasury Corporation.

The Australia dollar HQLA universe of sustainability-themed securities is small (totalling less than $6 billion as of April 2020) relative to the limited universe of HQLA assets available to ADIs. Several ADI balance sheets are looking to build their holdings of green/sustainability-themed debt securities in support of strategic agendas to invest in such securities and create a more liquid market for sustainable debt. Incentivising increased HQLA issuance in this format, especially with the large and increasing infrastructure spending programs of the states, along with stimulus packages announced through the Covid-19 period, should see a significant increase from the current universe attracting more investors and improving liquidity significantly.

Sustainability innovation investment

Sustainability-focused businesses, including those focused on transformative technologies, have a critical role to play in building a resilient and sustainable Australian economy and society over coming decades.

The challenge of building an ecosystem that supports investment in innovative companies has been the subject of several government inquiries going back to the Campbell Report in 1981.[230] The growth of superannuation capital has the potential to create a pool of equity capital that is available to invest in growing companies. However, to maximise investment, it is necessary to understand and address challenges that investors face, including the need for superannuation funds to manage the short-term liquidity of their investment portfolios.[231]

There is a need for financial system participants, including governments, banks and investors, to work together to support the development of impactful technologies by helping to remove roadblocks to their commercialisation at various stages. There are clear benefits of government interventions, including technology validation schemes, commercialisation grants and demonstration projects, to support market confidence in new technologies. For maximum effectiveness, such initiatives should be aligned with existing plans, such as the Commonwealth's Technology Investment Roadmap and international efforts like the Leadership Group for Industry Transition, of which Australia is a member.[232] It is argued that the key challenge that must be addressed is not a lack of innovative ideas; instead, it is the insufficient amounts of capital currently allocated to commercialising innovative solutions.

At present, the two major sources of capital for smaller growth companies are venture capital and listing on the ASX. In respect to venture capital, while there is a lack of market data, evidence suggests the total market is around US$3 billion,[233] with KMPG estimating that venture capital funding rose from US$1.033 billion in 2018 to US$1.145 billion in 2019.[234] In respect to ASX listings, the ASX Small Cap index has 197 participants with a total value of around $5 billion.[235] In regards to two main areas of focus for transition, information and communications technology and clean technology, the S&P/ASX All Technology Index (XTX) currently has 46 participants across a range of sectors with an overall value of more than $100 billion,[236] while the Deloitte Australia Clean Tech Index[237] consists of 92 stocks listed with a market capitalisation of $54 billion.

The need for Australian superannuation funds to be able to regularly price and trade assets means that establishing pathways between venture capital, private equity and listed markets is identified as a key challenge and opportunity. There is a need to develop investment models that align with liquidity requirements of superannuation funds and to ensure social and environmental solutions that have longer innovation and business cycles and/or high capital requirements have access to the start-up and growth capital they need to thrive.

Access to financing is essential to drive innovation and commercialisation of solutions to pressing social and environmental challenges. A suite of fit-for-purpose financing options is required to enable a broad spectrum of social and environmental solutions. There is a need for support for sustainability-focused start-up businesses through blended finance mechanisms, including credit guarantees supported by the philanthropic sector and government to address lack of securable assets and regular cash-flows. Guarantees and credit enhancement (including first loss capital) could be used to reduce the inherent risk of early stage investment.

Australia as a sustainable finance market hub

There is the potential for Australia to become a sustainable finance market hub for raising capital and finance. Collectively, the recommendations contained in the Roadmap, if fully implemented, would position Australia's financial system to support the needs of Australian financial system participants and to compete globally. Several nations have already publicly indicated ambitions to develop their financial systems as sustainable finance hubs. In particular, the UK has established a Green Finance Institute[238] as a mechanism to harness global finance for local solutions, the German Federal Government's Sustainable Finance Committee has identified an ambition for Germany to become a leading centre for sustainable finance, and Singapore's Government, through the Monetary Authority of Singapore, has identified the opportunity for Singapore to be a leading centre for green finance in Asia and globally.[239]

ASFI recognises that the development and transition of Australia's financial markets to deliver sustainability outcomes is an evolutionary process. While the Roadmap's recommendations provide guidance for individual participants in Australia's financial system, as part of assessing implementation of the Roadmap, there is a need to develop structures that assess whether sustainable finance markets are functioning efficiently.

Recommendation 32

Australia's financial system participants work collaboratively to support the development of a sustainable capital market by:

- working with financial system regulators to develop guidance for financial institutions on treatment of green and resilience or sustainable assets related to risk weightings and capital treatment of such assets;
- removing roadblocks to commercialising impactful technologies and developing investment models that align with liquidity requirements of financial system participants;
- working with financial system regulators to develop guidance on sustainable benchmarks and indices;
- supporting sustainability-focused businesses across the Asia-Pacific region to raise capital and issue bonds through Australia's capital markets; and
- supporting sustainability-focused businesses in the Asia-Pacific to list on ASX or other Australian stock exchanges, including clean technology businesses that deliver products and services throughout this region.

Recommendation 33

Australia's financial system participants produce a regular report that considers whether Australia's sustainable finance markets are functioning efficiently to support the delivery of net zero emissions by 2050, consistent with science-based targets.

The report would provide advice to regulators, government and financial market participants on measures that could be introduced to enhance the efficient functioning of capital markets. A key area for consideration would be whether intermediaries are supplying, and financial system participants are demanding, services that support implementation. Areas of focus of a report would include the availability and appropriateness of market benchmarks and indices that align with net zero targets, impediments to investment such as market liquidity, and diversity of investment opportunities.

7.4.3 Sustainability impact and resilience markets

ASFI recognises that events, including Covid-19 and an increase in the frequency and severity of climate change-induced extreme weather events, are placing individuals and communities under extreme pressure. Financial system participants can play a role in supporting individuals and communities through traumatic events by working in partnership.

Mitigation

The increase in frequency and extremity of weather events is putting pressure on insurance companies to provide universal insurance coverage across Australia. The scale of changes in the climate means the issue of access to mitigation and insurance that supports resilience is no longer just impacting minority pockets of the population but is being felt across larger cohorts. This requires a more active consideration of issues of accessibility and inclusion.

Taking into account the findings of the Northern Australia Insurance Premiums Taskforce in 2015 and the Australian Business Roundtable for Disaster Resilience and Safer Communities, which concluded that mitigation is the most effective adaption to climate risks, a multi-stakeholder approach for developing mitigation activities is required. This would involve communities/civic society, planning bodies, engineering and building industry, financial services companies (insurers, banks that provide loans for projects and investments) and government agencies working collaboratively and innovatively to achieve the intended outcomes.

Risk reduction and mitigation strategies provide sustainable options for communities in the long run. The Productivity Commission's view[240] is that paying for mitigation (pre-event) is far cheaper than paying for remediation (post-event) and natural disaster costs have become a growing, unfunded liability for governments. An example of mitigation (though post an event but mitigating future events) is flood levees in Western Queensland, which allowed insurer Suncorp to reduce insurance premiums.

Funding of mitigation makes sure insured properties are capable of withstanding natural perils, thereby reducing losses when natural catastrophes occur. The reduction in residual losses, post mitigation, is likely to be factored into premium pricing by insurers. This should lead to a reduction in the insurance premiums (consistently over the long term) and increasing insurance affordability and availability across the community. Importantly, the ability to access affordable insurance unlocks the capacity of banks to lend against an asset and the capacity of households, businesses and institutional investors to invest. An example of an effective mitigation program is the Queensland Government's Household Resilience Program that provided funding to help eligible home-owners in coastal parts of Queensland improve the resilience of their homes against cyclones.[241]

Sustainability impact and resilience market architecture

Natural capital, carbon, social and affordable housing, social enterprises, community facilities, and climate change mitigation and adaptation are among some of the areas that have been identified where there is a need for the financial system to scale investment. A specific focus is the need to create market architecture to support the scaling of investment.

The Australian Competition and Consumer Commission's (ACCC) recent work on water markets for the Murray–Darling Basin[242] provides a valuable template that can be applied across other markets. ACCC's preliminary view is that the market architecture for water markets is showing signs of strain as the market has outgrown its original design, frameworks and governance arrangements. The ACCC argues that, while market trading of water rights across the Murray–Darling Basin is estimated to be more than $1.5 billion per year, "the governance, regulatory and operational frameworks supporting water markets have not developed to accommodate a market of this scale, and are no longer adequate."[243] The core conclusions of ACCC's interim report is the need for reform of market architecture to build more robust frameworks for trade and improve arrangements for addressing impacts on other water users and the environment.

ACCC's arguments around the importance of market architecture have broader implications across the development of all sustainability impact and resilience markets including natural capital, carbon, social enterprise, social and affordable housing and social impact investment.

ASFI notes the independent review of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) by Professor Graeme Samuel AC. The review's interim report, published in June 2020,[244] proposes the establishment of National Environmental Standards that would be legally enforceable with transparent accreditation and strong assurance, monitoring and compliance. The establishment of Standards, coupled with assurance, monitoring, compliance and enforcement, has the capacity to support the development of natural capital markets. The Australian Government has announced that it will establish an environmental markets expert advisory group. This engagement will provide an opportunity for financial system participants to work collaboratively to support the development of appropriate market structures. There is an opportunity for financial system participants, including state and federal governments, to work together to develop all sustainability impact and resilience markets. While many of the elements of sustainability impact and resilience markets exist, there is a need to build the design, frameworks and governance arrangements. In this regard, it is worth highlighting that development of markets does not need to be seen as a siloed activity for a particular area of focus. There is an opportunity to create market structures that brings together all sustainability impact and resilience capital market activities. A single market platform could play a role in bringing together all market participants. This would also create an enabling environment that would support information disclosure, assurance and integrity standards that are critical elements of an efficient market.

ASFI specifically notes and recommends that financial system participants support the establishment of an independent Social Impact Investment (SII) wholesaler for Australia. The concept of a wholesaler is based on international precedent for national wholesalers from the *Global Steering Group for Impact Investment Report* and examples such as Big Society Capital in the UK. A common issue that has played out both in Australia and globally and has limited the take up of social-focused sustainable investment is a lack of SII opportunities. A significant challenge is the need for more SII intermediaries, specifically both fund managers and originators of transactions. Experience from other countries in addressing this issue shows that catalytic institutions, such as national SII wholesalers, have provided ‘go-to places’ to help co-ordinate fragmented efforts and support the development of intermediation and related investible products. Big Society Capital in the UK is a leading example. In the Australian context, the CEFC is a similar environmentally focused example supporting energy efficiency and renewable transactions.

Recommendation 34

Australia’s financial system participants work collaboratively to promote climate risk mitigation efforts and to ensure buildings are disaster resilient:

- implementing a framework for assessing the cost of mitigation investment that factors in broader social costs and benefits;
- supporting, through credit guarantees and other measures, banks/lenders to lend for mitigation retrofits through issuance of resilience bonds; and
- supporting household-level risk mitigation (for owners and renters) through education and incentives for those who cannot afford to implement retrofitting.

Recommendation 35

Australia’s financial system participants work collaboratively to support development of sustainability impact and resilience markets, including natural capital, carbon, impact investment and climate mitigation and adaptation, with a focus on:

- building market architecture through the establishment of common platforms for information disclosure, trading and intermediary services with strong governance rules and enforcement;
- development of standardised documentation to reduce transaction costs; and support for credit guarantees and other measures that reduce the risk of financing and investing; and
- developing social enterprises and impact investments that focus on Asia-Pacific countries.

Recommendation 36

Australia’s financial system participants back initiatives to catalyse the establishment of sustainability impact and resilience markets by supporting the formation of an independent Social Impact Investment wholesaler for Australia.

7.4.4 Real asset markets

Infrastructure

The OECD estimates that, globally, investment of US$6.9 trillion a year in infrastructure is required up to 2030 to meet climate and development objectives. With current energy, transport, building and water infrastructure making up more than 60% of global carbon emissions,[245] the OECD, World Bank and UN Environment argue there is a need for a transformation of the existing infrastructure system to achieve the world’s climate and development objectives.

To transform Australia’s infrastructure system, there is a need to acknowledge the long economic life of infrastructure assets, which is reflected in examples of governments negotiating 99-year leases with private operators. Carbon lock-in is particularly important for infrastructure. Researchers from Yale University and the University of California[246] have argued that carbon lock-in arises when the infrastructural and technological lock-in is reinforced by institutional lock-in and behavioural lock-in.

Australia’s financial system has a long track record of financing and investing in infrastructure. There is clear appetite for banks and superannuation funds to develop and regenerate infrastructure. There is a need for Australia’s infrastructure decision-makers to ensure that decisions made today do not lock Australia into a high-carbon emissions future. In this regard, given the importance that infrastructure plays in carbon emissions, it is recommended that Australia's Infrastructure Priority List produced by Infrastructure Australia explicitly align infrastructure priorities with the objective of achieving net zero emissions by 2050.

Complexity in federal, state and local regulatory frameworks and market considerations for infrastructure can act as a disincentive to investment. A recent AEMO study has argued that, if actions are taken to address network congestion, system curtailment and participant spill, the National Electricity Market (NEM) could be operated securely with up to 75% instantaneous penetration of wind and solar.[247] The potential for the NEM to operate at 75% instantaneous penetration of wind and solar should be seen in the context that, according to the *World Energy Outlook 2020*, Solar PV is now consistently cheaper than new coal- or gas-fired power plants in most countries, and solar projects now offer some of the lowest-cost electricity ever seen.[248]

ASFI recommends that financial institutions work with the Productivity Commission and Infrastructure Australia to streamline regulatory requirements for investment into essential assets including energy network, transport concessions and social infrastructure, with the aim of substantially reducing the time/cost/effort involved. This recommendation applies across all infrastructure: energy networks, transport concessions and others such as social housing and private–public partnerships. ASFI recommends that AEMO, AEMC, AER, ESB and the COAG Energy Council expedite an actionable Integrated System Plan.

Built environment

Australians' financial wealth includes substantial amounts invested in their own homes. As climate change continues to increase climate and disaster risk, homes are increasingly coming under threat. For the financial industry that invests, lends to, and provides insurance for housing, the quality of homes and their resilience to climate and disaster risk is important.

It is expected that institutional investment in residential property in Australia, and particularly the Build-to-Rent market, will develop over coming decades. This has the potential to support development of high-quality, sustainable housing, evidenced by the evolution of the office sector in Australia. Institutional investment in residential housing can also provide housing security for tenants. With the likelihood that some Australians will remain renters for the rest of their lives, having an institutional investor as a landlord can provide housing stability and ongoing maintenance spend to ensure quality is maintained. There is the potential that increased institutional investment in housing can also support increased supply of social and affordable housing and improved community inclusion through a mixed tenancy approach, with a portion of the housing in the Build-to-Rent developments provided to social or affordable housing.

There are several challenges in transitioning the built environment to be sustainable. Aside from the commercial office sector, where mandatory disclosure through NABERS exists and Green Star is used, and key major developments where Green Star can be found, there is a lack of consistent benchmarks available to compare the performance of the diverse spread of building types in Australia. There is no requirement to measure or disclose energy and carbon in a systematic manner across the breadth of the built environment.

These problems are exacerbated in the residential sector where it is not mandatory to measure the performance of individual homes. While the Council of Australian Government's (COAG) commitment to deliver a building code that will drive net zero buildings by 2030 is welcome, there remain significant challenges to ensure the residential construction sector is equipped to deliver, and incentivised to meet, consumer expectations. Challenges relate not just to environmental indicators (energy, carbon, and water), but also to aspects of resilience, health and social sustainability. In the case of housing, for example, there is no simple resilience assessment tool or standard available for volume home builders to test against, with the best option being the Insurance Council of Australia's concept Building Resilience Rating Tool.

In addition to the importance of changes to the National Construction Code focused on enhancing over time the energy efficiency of buildings to reduce emissions and reduce energy bills for home-owners, future changes need to be considered on the basis of the expected lifetime of the home, including allowance for increased frequency and severity of natural disasters due to climate change over time.

Recommendation 37

Australia's financial system participants finance the development and regeneration of real assets, including infrastructure and property (housing, industrial and commercial), through:

- aligning Australia's Infrastructure Priority List produced by Infrastructure Australia with the objective of achieving net zero emissions by 2050;
- efficient and streamlined regulatory requirements for investment into essential assets, including energy network, transport concessions and social infrastructure, with the aim of substantially reducing the time/cost/effort involved to invest and finance critical infrastructure;
- working with AEMO, AEMC, AER, ESB and the COAG Energy Council to expedite an actionable Integrated System Plan with the objective of unlocking critical investment into transmission, interconnection, renewables and distribution;
- developing infrastructure investment across the Asia-Pacific region that is focused on delivering social and environmental outcomes;

- integrating environmental, social and governance (ESG) factors into the investment decision-making process for new infrastructure projects, and for expansions to existing assets, using broadly accepted standards and frameworks relevant to the specific category of infrastructure assets, such as GRESB's Infrastructure Asset Assessment, Infrastructure Sustainability Council of Australia's (ISCA) Infrastructure Sustainability rating and the Green Building Council of Australia's Green Star Rating System;
- using a national rating scheme for the energy performance of homes, such as NatHERS, and establishing mandatory disclosure of performance at the point of sale and lease;
- supporting an industry approach to adopt the three major rating tools (NABERS, Green Star and ISCA's Infrastructure Sustainability rating scheme) as measurement benchmarks, provided they implement a net zero emissions pathway consistent with a 1.5°C trajectory across operational and embodied carbon, and minimum standards for new and existing assets to become more climate change resilient and socially responsible;
- integrating built environment ratings into consumer and business lending and investment valuations, including infrastructure projects; and
- working with stakeholders, including the construction sector, to update the National Construction Code so that future residential properties are built to be resilient to climate change and broader climate and geological risks, and ensure energy efficiency as well as use of sustainable materials.

CASE STUDY

Water infrastructure

Water is a commodity that has different uses: household, industrial, agriculture and biodiversity. The variability of rainfall which can be expected to increase due to climate change is already impacting on Australia's biodiversity. According to the Murray–Darling Basin Authority, the deaths of up to three million fish in the Lower Darling between December 2018 and January 2019 were due to the lack of water flowing into the northern rivers and the impact of many years of over-allocation of precious water resources throughout the entire Basin.[249]

Over the last century, supply of water has required large-scale capital investments. Factors including changes in technology and impact of water restrictions are supporting distributed water infrastructure. An example of this is the preparedness of households to invest in water conservation through the purchase of rainwater tanks. ABS data following the Millennium drought revealed that, in March 2013, 34% of Australian households living in a dwelling suitable for a rainwater tank had a rainwater tank compared with 32% in 2010 and 24% in 2007.[250]

The evolution of technology is creating opportunities to combine desalination plants with renewable energy. An example is Sundrop Farms located in Port Augusta, which grows tomatoes hydroponically using solar energy to heat and cool greenhouses and produce desalinated water from the Spencer Gulf.[251] Sydney's Desalination Plant is itself powered by 100% renewable energy.[252]

In addition to innovation around renewable energy, there are positive examples of infrastructure assets integrating water into their operations. Adelaide Airport has developed a project to grow lucerne adjacent to its runways using recycled water to reduce the urban heat effect.[253] Recognising that severe storms result in sediment runoff that flows into Moreton Bay, the Port of Brisbane has invested in rehabilitating the Lockyer Valley upstream by planting and maintaining 9,000 native plants.[254] Investor tools, such as the GRESB Infrastructure Asset Assessment, incorporate consideration of water into assessment.[255]

8. Action plan

The Action Plan includes:

- actions that will only need to be undertaken once (e.g. establishment of ASFI as a permanent body) to establish or embed the necessary change; and
- actions that will need to be undertaken on an ongoing or regular basis (e.g. stress testing). The timeframes in the Action Plan refer to the timeframe within which it is recommended that the action is first implemented.

In many cases, action to enable implementation should begin immediately.

Key for timeframes

Short-term 2021–2022 →
Medium-term 2023–2025 →
Long-term 2026–2030 →

Where action is required by multiple financial system participants, the recommended lead is highlighted in blue. For actions where it is proposed that ASFI would lead, ASFI is bolded.

	Recommendation — Action required by:	Financial institutions	Financial regulators	Government	Others	Short-term	Medium-term	Long-term
	EMBEDDING SUSTAINABILITY IN LEADERSHIP							
1	Lead accountability for sustainability from board level	■				→		
	Integrate sustainability into purpose, corporate strategy, risk management frameworks, remuneration structures and organisational culture	■					→	
	Manage and measure impact of activities on others	■					→	
2	Build the necessary skills and capabilities by:						→	
	• working with existing industry training organisations to deliver new skills and training in sustainable finance across all levels of an organisation	■	●	◆	i. Industry Training Organisations ii. Industry bodies iii. Accounting and Auditing bodies		→	
	• supporting the establishment of university-hosted centres for sustainable finance	■			Universities		→	
	• working with the Australian university sector to ensure that core curriculum for all finance and related discipline degrees includes sustainability	■			Universities		→	
	• developing strategic skills partnerships with experts outside of financial institutions to build mutual understanding	■			i. Research organisations ii. Universities		→	
3	Build inclusive corporate cultures that facilitate and protect employees to speak up	■					→	
	Support industry-funded employee codes	■			Industry bodies	→		

	Recommendation — Action required by:	Financial institutions	Financial regulators	Government	Others	Short-term	Medium-term	Long-term
4	Align remuneration structures with sustainable long-term value creation	■				→	→	
	Consider embedding sustainability targets into remuneration and incentive practices, and rewarding for sustainability performance and leadership	■				→	→	
5	Establish the Australian Sustainable Finance Initiative as a permanent body	■	●	◆	i. Industry bodies ii. Civil society representatives iii. Other relevant initiatives (e.g. CMSI)	→		
	Establish special projects and forums consistently with legal obligations of all participants (including competition laws) as a mechanism to provide guidance on implementation of the Roadmap				**ASFI**	→	→	
6	Establish a First Peoples Financial Services Office led by an Aboriginal or Torres Strait Islander person	■			**i. ASFI** ii. Indigenous representative organisations	→		
7	Work to codify the principle of free, prior and informed consent in decisions made by financial institutions	■			ASFI	→		
8	Establish international partnerships to support the implementation of the Australian Sustainable Finance Roadmap	■	●	◆	i. ASFI ii. Relevant international initiatives	→	→	
	INTEGRATING SUSTAINABILITY INTO PRACTICE							
9	Establish a key project to explore the implementation of a sustainable finance taxonomy in Australia	■	●	◆	**i. ASFI** ii. Legal experts iii. Industry experts iv. Technology experts v. Sustainability experts	→	→	
10	Join the International Platform on Sustainable Finance			◆ (Australian Government)		→		
11	Financial institutions with annual consolidated revenue of more than $100m report according to TCFD recommendations by 2023 on an 'if not, why not' basis	■	●			→	→	
12	All ASX-listed companies, beginning with the ASX 300, report according to TCFD recommendations by 2023 on an 'if not, why not' basis	■	●		i. ASX ii. ASX300 companies	→	→	
	Develop guidance to support TCFD-aligned reporting by ASX-listed entities.		●		i. ASX	→		
13	Develop guidance to support TCFD-aligned reporting by financial institutions	■			**i. ASFI** ii. CMSI iii. Other relevant stakeholders	→		
14	Play a leadership role in the development of the TNFD by:							
	• funding research that supports TNFD's working groups.	■		◆		→	→	
	• engaging in the process to develop the TNFD reporting framework	■				→		

	Recommendation — Action required by:	Financial institutions	Financial regulators	Government	Others	Short-term	Medium-term	Long-term
	• establishing, through ASFI, an Australian project to develop guidance for nature-related financial disclosures aligned to Australia's biodiversity challenges	■		◆	i. **ASFI** ii. Research organisations iii. Academics iv. Biodiversity experts v. Professional bodies		→	
15	Mandate sustainability reporting and assurance for listed entities and for unlisted assets that are wholly owned by financial institutions		●	◆	i. ASX ii. Listed companies iii. Unlisted assets (wholly owned by financial institutions)		→	
	Work to align with international developments in relation to comprehensive corporate reporting	■	●	◆	i. Professional bodies ii. Non-financial institutions		→	
16	Undertake scenario analysis and stress test the institution's resilience to physical and transition risks from climate change	■					→	
	Create an industry-led stress-testing framework	■ (building off work of CMSI)				→		
	Expand scenario analysis and stress tests to include other sustainability-related impacts, for example, biodiversity loss	■	●					→
	Develop guidance on best practice approaches to conducting stress tests that is relevant for financial institutions of different sizes	■	●		ASFI	→		
17	APRA expands its vulnerability assessments to include fit-for-purpose assessments for small and medium financial institutions across Australia, as well as the superannuation and insurance sectors	■	●				→	
18	Value environmental and social externalities	■					→	
	Facilitate compilation of national- and state- level data sets by developing general principles and guidance to allow financial system participants to measure and assess multiple capitals	■		◆				→
19	Work with Australia's financial system regulators on an ongoing basis to embed sustainability into regulatory guidance and standards to drive system-wide practice	■	●		**ASFI**	→		
20	Drive best practice for the benefit of the whole of the Australian economy and society, including by:							
	• embedding sustainability into outsourcing and procurement practices	■				→		
	• embedding sustainability information into products and services for households and businesses	■					→	
21	Develop stewardship codes	■			Industry bodies		→	

Recommendation	Action required by:	Financial institutions	Financial regulators	Government	Others	Short-term	Medium-term	Long-term
ENABLING RESILIENCE FOR ALL AUSTRALIANS								
22	Support the establishment of community finance that can be accessed by place-based groups as part of a place-based community resilience strategy	■		◆ (Local government)	i. Community organisations ii. Social enterprises and intermediaries	→	→	
23	Develop income and revenue contingent loans			◆ (All levels)		→	→	
24	Establish Financial Inclusions Action Plans	■				→		
	Review current practices and design of products and services to embed financial inclusion	■				→		
25	Consistent with applicable laws and regulations, measure and report on:	■						
	• financial distress for households	■				→	→	
	• financial outcomes for Indigenous customers	■				→	→	
26	Collaborate to support networks, programs and initiatives that build individual and community financial capability	■	●	◆	i. Industry bodies ii. Relevant civil society organisations	→		
27	Support the development of labelling standards that provide consumers with access to consistent labelling and disclosure of the sustainability of products to provide clarity on quality of products and how sustainability is considered and managed within products	■				→	→	
28	Enable Australians to make financial decisions based on their values and sustainability preferences, including:							
	• ensuring financial advisers (human and robot), superannuation funds, accountants and platforms consider the sustainability preferences of consumers, including through use of a standard set of sustainability preference questions	■			Relevant standards bodies	→		
	• for ASIC to consider strengthening its Regulatory Guide 65 to facilitate meaningful disclosures on the extent to which product issuers disclose whether and how labour standards, environmental, social or ethical considerations are taken into account for investment products		●			→		
	• for trustees of registrable superannuation entities and responsible entities of other publicly available funds to voluntarily disclose their portfolio holdings within 90 days of each half year	■				→		
	• collaborating to develop best practice guidelines for the disclosure of portfolio holdings by superannuation entities and other publicly available funds	■				→		
	• passing regulations to prescribe the content and format of disclosure of portfolio holdings by superannuation entities			◆ (Australian Government)		→		
29	Develop best practice principles to guide product design, delivery and disclosure to drive sustainable and community-focused outcomes	■			**ASFI**	→		
30	Support the development and implementation of an Australian-focused well-being framework			◆		→	→	

Recommendation	Action required by:	Financial institutions	Financial regulators	Government	Others	Short-term	Medium-term	Long-term
	BUILDING SUSTAINABLE FINANCE MARKETS							
31	Establish interim science-based targets and trajectories that will support individual financial institutions to make net-zero-aligned decisions	■			i. **ASFI** ii. Climate experts iii. Academia	→		
32	Work collaboratively to support development of a sustainable capital market by:		●					
	• working with financial system regulators to develop guidance for financial institutions on treatment of green and resilience or sustainable assets related to risk weightings and capital treatment of such assets	■	●			→	→	
	• removing roadblocks to commercialising impactful technologies and developing investment models that align with liquidity requirements of financial system participants	■		◆		→	→	
	• working with financial system regulators in developing guidance on sustainable benchmarks and indices	■	●			→	→	
	• supporting sustainability-focused businesses across the Asia-Pacific region to raise capital and issue bonds through Australia's capital markets	■		◆	ASX	→	→	
	• supporting sustainability-focused Asia-Pacific businesses to list on ASX or other Australian stock exchanges	■		◆	ASX	→	→	
33	Produce a regular report that considers whether Australia's sustainable finance markets are functioning efficiently to support the delivery of net zero emissions by 2050, consistent with science-based targets	■			**ASFI**	→	→	
34	Work collaboratively to promote climate risk mitigation efforts and to ensure buildings are disaster resilient by:							
	• implementing a framework for assessing the cost of mitigation investment that factors in the broader social costs and benefits	■		◆	Relevant industry bodies	→		
	• supporting, through credit guarantees and other measures, banks/lenders to lend for mitigation retrofits through issuance of resilience bonds	■				→	→	
	• supporting household-level risk mitigation for owners and renters through education and incentives for those who cannot afford to implement retrofitting	■		◆	Relevant industry bodies	→	→	
35	Work collaboratively to support development of sustainability impact and resilience markets including natural capital, carbon, impact investment and climate mitigation and adaptation, with a focus on:							
	• building market architecture through the establishment of common platforms for information disclosure, trading and intermediary services with strong governance rules and enforcement	■		◆ (Australian, State and Territory governments)		→		
	• development of standardised documentation and support for credit guarantees and other measures that reduce the risk of financing and investing	■			Foundations / philanthropists	→		
	• developing social enterprises and impact investments that focus on Asia-Pacific countries	■		◆	Foundations / philanthropists	→	→	

	Recommendation — Action required by:	Financial institutions	Financial regulators	Government	Others	Short-term	Medium-term	Long-term
36	Support the formation of an independent Social Impact Investment wholesaler for Australia	■		◆		→	→	
37	Finance the development and regeneration of real assets, including infrastructure and property (housing, industrial and commercial) through:							
	• aligning Australia's Infrastructure Priority List produced by Infrastructure Australia with the objective of achieving net zero emissions by 2050				Infrastructure Australia	→		
	• efficient and streamlined regulatory requirements for investment into essential assets			◆	Relevant regulators	→	→	
	• working with AEMO, AEMC, AER, ESB and the COAG Energy Council to expedite an actionable Integrated System Plan	■		◆ (COAG Energy Council)	AEMO, AEMC, AER, ESB	→	→	
	• developing infrastructure investment across the Asia-Pacific region that is focused on delivering social and environmental outcomes	■		◆		→	→	
	• integrating ESG into the investment decision-making process for new infrastructure projects, and for expansions to existing assets, using broadly accepted standards and frameworks relevant to the specific category of infrastructure assets	■		◆		→		
	• using a national rating scheme for the energy performance of homes, such as NatHERS, and establishing mandatory disclosure of performance at the point of sale and lease	■		◆	Relevant industry bodies	→		
	• supporting an industry approach to adopt the three major rating tools (NABERS, Green Star and ISCA's Infrastructure Sustainability rating scheme) as measurement benchmarks and minimum standards for new and existing assets to become more climate change resilient and socially responsible	■			Relevant industry bodies	→		
	• integrating built environment ratings into consumer and business lending and investment valuations, including infrastructure projects	■		◆	Relevant industry bodies	→	→	
	• working with stakeholders to update the National Construction Code so that future residential properties are built to be resilient to climate change and broader climate and geological risks and ensure energy efficiency as well as use of sustainable materials	■		◆	i. Australian Building Codes Board ii. Construction sector	→	→	

9. Conclusion – outcomes from implementation

Implementation of the recommendations can achieve the Roadmap vision for Australia's financial system – a financial system:

- that is sustainable, resilient and stable and can manage systemic risks and other shocks and strains;
- that meets both the present and the long-term needs of all Australians, the environment and the economy;
- where financial decisions are informed and consider sustainability risks, impacts and opportunities;
- that enhances financial inclusion and well-being and informed choice; and
- where capital flows support Australia in delivering on sustainable development goals, including facilitating an orderly transition to a net zero emissions, resource-efficient and socially inclusive economy.

Specifically, delivery of the Roadmap would align Australia's financial system and participants to:

- put sustainability at the core of decision-making, with decisions better informed by transparent and consistent disclosures;
- consider material sustainability risks and opportunities for the organisation alongside the impact (positive and negative) of their financial decisions on society, the environment and the economy;
- effectively manage and mitigate sustainability risks, such as the systemic risk presented by climate change (physical and transition);
- deliver long-term sustainable outcomes, while responding dynamically to short-term demands;
- serve the present and long-term needs of all Australians, including our most vulnerable and disadvantaged, and reduce the 'poverty premium' – putting Australians at the centre of finance;
- enhance financial inclusion and the resilience and well-being of households, communities and natural ecosystems;
- build the financial capability of all Australians and enable Australians to make informed choices regarding financial products and services that meet their needs and align with their sustainability preferences;
- connect sustainability risks and opportunities with institutional and individual accountabilities;
- invest and support the creation of jobs and skills for Australians;
- provide capital that:
  - — builds a sustainable and resilient economy, society and environment;
  - — supports delivery of the SDGs, Paris Agreement, Sendai Framework and Convention on Biological Diversity and implementation of the UN Guiding Principles on Business and Human Rights; and
  - — facilitates an orderly transition to a net zero emissions economy for Australia by 2050.
- support countries across the Asia-Pacific region to build resilient and sustainable economies and societies;
- be more productive, prosperous and participatory; and
- establish Australia as a sustainable finance market hub for raising capital and finance.

Acknowledgements

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Acronyms and abbreviations

ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ACOSS	Australian Council of Social Service
ADI	Authorised deposit-taking institution
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AIHW	Australian Institute of Health and Welfare
APRA	Australian Prudential Regulation Authority
ASFI	Australian Sustainable Finance Initiative
ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
BIS	Bank for International Settlements
CDSB	Climate Disclosure Standards Board
CEFC	Clean Energy Finance Corporation
CfAT	Centre for Appropriate Technology
CMSI	Climate Measurement Standards Initiative
Convention on Biological Diversity	The Convention on Biological Diversity, established in 1992 at the UN Conference on Environment and Development (the Rio “Earth Summit”), which entered into force on 29 December 1993
DFAT	Department of Foreign Affairs and Trade
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
ESB	Energy Security Board
ESG	ESG is used in different contexts. ESG factors are environment, social and governance factors. The question of materiality of ESG factors relates to the way investors integrate ESG factors into investment decision-making.
EV	Electric vehicle
FAST	Finance Against Slavery and Trafficking
FIAP	Financial Inclusion Action Plan
FSB	Financial Stability Board
GDP	Gross Domestic Product
GFC	Global financial crisis (between mid-2007 and early 2009)
GHG	Greenhouse gas
GRI	Global Reporting Initiative
HECS	Higher Education Contributions Scheme
HLEG	High-level expert group on sustainable finance
HQLA	high-quality liquid assets
IAIS	International Association of Insurance Supervisors
ICL	Income Contingent Loans
IFRS	International Financial Reporting Standards
IIRC	International Integrated Reporting Council
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
IPCC	Intergovernmental Panel on Climate Change
IPSF	International Platform on Sustainable Finance
ISCA	Infrastructure Sustainability Council of Australia
MSSI	Melbourne Sustainable Society Institute
MW	Megawatt
MWh	Megawatt-hour
NABERS	National Australian Built Environment Rating System
NatHERS	Nationwide House Energy Rating Scheme
NEM	National Electricity Market
NGFS	Network for Greening the Financial System
NHFIC	National Housing Finance and Investment Corporation
OECD	Organisation for Economic Co-operation and Development
Paris Agreement	The Paris Agreement adopted by the 21st session of the Conference of the Parties of the UN Framework Convention on Climate Change on 21 December 2015
RAP	Reconciliation Action Plan
RBA	Reserve Bank of Australia
RCL	Revenue Contingent Loans
Roadmap	Australian Sustainable Finance Roadmap
RSE	registrable superannuation entity
RWA	Risk Weighted Assets
SASB	Sustainability Accounting Standards Board
SEEA	System of Environmental Economic Accounting
Sendai Framework	The Sendai Framework for Disaster Risk Reduction 2015–2030, adopted at the Third UN World Conference in Sendai, Japan, on 18 March 2015
SDGs	The Sustainable Development Goals adopted by resolution (70/1) of the UN General Assembly on 25 September 2015
SIF	Sustainable Insurance Forum
SII	Social Impact Investment
TCFD	Task Force on Climate-related Financial Disclosures
TNFD	Task Force on Nature-related Financial Disclosures
UN	United Nations
UNDRIP	UN Declaration on the Rights of Indigenous Peoples
UNEP FI	UN Environment Programme Finance Initiative
WHO	World Health Organization

All amounts are expressed in Australian dollars unless another currency is indicated.

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