Submission to the Senate Inquiry into the United Nations Sustainable Development Goals (SDGs)

Cameron Allen[1], Graciela Metternicht[1], Thomas Wiedmann[2]

Background on the authors

Cameron Allen is an international sustainable development expert with over 15 years of experience working with the United Nations (UN), the Australian Government and international NGOs and organizations. He previously worked as an expert with UN Division for Sustainable Development where he supported the intergovernmental negotiations on the SDGs for the UN Conference on Sustainable Development in 2012 (Rio+20). He subsequently coordinated a range of regional follow-up processes, consultations and research on the SDGs, including regional and national indicator-based assessments and analysis. He has worked as a manager with several Australian Government agencies including the Australian Bureau of Statistics, Department of Climate Change, and Department of Environment. He is currently a consultant and PhD candidate at UNSW where his research focuses on evidence-based approaches to support national SDG implementation. He has published several recent academic journal papers on SDG indicators, modelling, scenarios and systems analysis to support SDG implementation. Working as a consultant, he has also undertaken several recent research projects on the SDGs for the UN and in Australia, including as Chief Analyst working on the SDG baseline assessment for Australia[3] under the leadership of the National Sustainable Development Council.

Graciela Metternicht is a Professor of Environmental Geography at the University of New South Wales Australia, with over 20 years of experience in environmental management and policy. She is Deputy Chair of the Australian Academy of Sciences National Committee of Geographical Sciences; co-chair of the Dryland Ecosystems Specialist Group of the IUCN; and member of the Science Policy Interface of the UN Convention to Combat Desertification; the Assessment Methodology Group of UNEP's 6th Global Environment Outlook, and the Enabling Ecosystem Surveillance WG of Australia's Ecosystem Science Council. Her research and expertise are primarily in the fields of environmental geography, with a focus on geospatial technologies and their application in environmental management and sustainability. Prior to joining UNSW, Professor Metternicht was Regional Coordinator of Early Warning and Assessment of the United Nations Environment Programme (UNEP). Previous academic appointments include Head of Discipline and Professor of Geospatial Systems and Environmental Management at the School of Natural and Built Environments of the University of South Australia and Professor of Spatial Sciences at Curtin University of Technology.

Thomas (Tommy) Wiedmann is an Associate Professor leading the Sustainability Assessment Program at UNSW Sydney, Australia. In teaching and research, he is guided by the question on how to achieve concurrent human and planetary well-being. His long-standing expertise is in integrated, quantitative sustainability assessment, industrial ecology and environmental footprint analysis. He is leading the development and application of the Industrial Ecology Virtual Laboratory (IELab), a collaborative research platform for environmentally extended multi-region input-output analysis. Tommy has coordinated a number of sustainability-related research projects funded by European and Australian Governments worth about $6m in total. In 2012 he received the *Thomson Reuters Citation Award* in Australia and has been listed as a *Highly Cited Researcher* and *World's Most Influential Scientific Minds* annually since 2015.

Response to the Terms of Reference

a. Understanding and awareness of the SDGs across the Australian Government and in the wider Australian community.

While it is difficult to clearly gauge the level of awareness and understanding of the SDGs in Australia, it is clear that they have received very limited attention and coverage in the media and

public discourse. Based on this, we would assume that the level of understanding and awareness of the SDGs in the Australian community and across government is low.

However, there are some pockets where activity on the SDGs is clearly evident, in particular within the international development community. Organisations such as the Australian Council for International Development (ACFID), the Australian Council of Social Services (ACOSS), the Global Compact Network of Australia (GCNA), and the Sustainable Development Solutions Network (SDSN) Australia/Pacific chapter based at Monash University have coordinated two multi-stakeholder summits on the SDGs (in 2016 and 2018) which have helped to raise the profile and increase awareness across government, business and civil society. These efforts have been supported with funding from the Department of Foreign Affairs and Trade (DFAT). There is a growing interest in the SDGs among development practitioners and academics, as well as government and business, however the SDGs are yet to reach the mainstream.

The announcement in 2017 by the Australian Government that it would be submitting a Voluntary National Review (VNR) on the 2030 Agenda to the High Level Political Forum (HLPF) on Sustainable Development has resulted in growing awareness of the SDGs across government agencies. A whole-of-government process has been established to coordinate Australia's implementation of the 2030 Agenda including the VNR, which is chaired by DFAT and the Department of Prime Minister and Cabinet (PM&C). Responsibility for reporting on specific goals has been allocated across government agencies based on sectoral responsibilities, however the process is largely perceived as a reporting exercise and limited additional resources have been allocated for follow-up. With DFAT apparently leading on the Government's response, it seems likely that SDGs will have a greater impact on Australia's international aid program, rather than its domestic policy.

This is an important distinction as the SDGs differ significantly from their predecessor (the Millennium Development Goals - MDGs) in two key areas. Firstly, the shift from MDGs to SDGs entails moving from goals applied to low income developing countries to universal goals applicable to all countries. Secondly, it involves a shift in focus from addressing the symptoms of development to addressing the underlying causes of economic, social and environmental challenges in an integrated framework, which requires the engagement of a wider set of actors and the transformation of our economies and societies. To achieve this, it is critical that the SDGs are not only embraced by the international development community in Australia, but also by government, business, civil society and the broader public. At this point in time, this is far from being realised.

b. Potential costs, benefits and opportunities for Australia in the domestic implementation of the SDGs.
The SDGs are an evidence-based framework comprising a broad and integrated set of 169 targets and 232 indicators. The long-run processes and systems perspective that are inherent in the SDGs present complex coordination and analytical problems for policymakers, planners, and business. Implicit in the SDG design is that each of the goals and targets depend upon, and influence, one another. Progress on one goal or target is linked through causal relationships and feedback loops to other goals and targets, creating opportunities for synergistic or 'win-win' outcomes as well as negative feedbacks and trade-offs. An integrated and coordinated approach to the SDGs is therefore needed to ensure that these feedbacks are understood and effectively optimised or managed. If mutually reinforcing actions are adopted, and trade-offs between targets minimized, countries such as Australia will be better placed to deliver on the transformative potential of the 2030 Agenda.

The importance of integrated, long-term national planning and effective prioritisation and coordination is fundamental to the SDGs, with 'policy and institutional coherence' as one of the

most important targets (17.14) for sustainable development. The 2030 timeframe of the SDGs encourages a shift to long-term thinking and visioning, based around a set of quantifiable, measurable, timebound national targets and indicators. This presents a considerable challenge for Australia as policymakers and planners have tended to operate in sectoral silos, and the potential for synergies and systemic outcomes have not been fully realised. Different ministries are responsible for energy, agriculture, education, health and other sectoral portfolios, with short-term plans and strategies developed to achieve desired outcomes in each of these priority areas. In doing so, they have failed to adequately assess and manage interactions and trade-offs across their portfolios. In general, immediate economic objectives such as growth and jobs have taken precedence over medium- to long-term social and environmental objectives, such as cost of living, education, innovation, addressing land degradation and biodiversity loss, and inter-generational equity.

The SDGs therefore add significant value and present a considerable opportunity for advancing Australia's agenda for sustainable growth at the domestic level. Currently there is very little long-term planning for the implementation of sustainable development in Australia. Australia lacks a national vision or long-term strategy document, as is the case in many other countries. Limited effort has been made to stimulate a cross-sectoral, national dialogue on where Australia is heading, and where we want to be as a country by 2030 or 2050[4]. Governments are reluctant to adopt clear, measurable targets, hesitant on the implications associated with transparent reporting, and the potential for political backlash if their implementation efforts fall short. Short-term election cycles, media reporting, and partisan tit-for-tat undermine Australia's ability for integrated, long-term planning that is essential to the implementation of the SDGs (Metternicht, 2018). Regular coverage and analysis of Australia's progress is dominated by discourse on a small set of economic indicators such as growth in gross domestic product and unemployment and inflation figures, and the daily movement of financial markets, rather than the quality of life, wellbeing and living standards of Australians.

The recent SDG baseline assessment for Australia[5] highlights how the SDGs can provide a powerful tool for assessing Australia's progress across a comprehensive range of objectives and benchmarks that are important for a modern, sustainable society. The assessment highlights that Australia is a wealthy nation with a healthy, well-educated and pragmatic population. The Australian economy has had a record period of 26 years of sustained growth and a high rate of employment. Productivity and personal incomes have been rising, and life expectancy is among the highest in the world.

However, there continue to be large disparities between education and health outcomes between indigenous and non-indigenous people, low-income households reliant upon government allowances are falling below the poverty line, wages growth has stagnated, and underemployment is on the rise. Rapidly escalating energy and utility costs are eating up a greater share of household disposable income, and the cost of owning your own home in a capital city is now beyond the reach of many young people. Over the past 15 years, inequality has increased, with a greater share of income going to the top 10% of income earners. Australia has the highest per capital greenhouse gas emissions of any OECD country and remains highly reliant upon fossil fuels despite considerable renewable resources. Forest area and biodiversity are both in decline, with many mammals and other species in a perilous state. Almost half of Australians feel they have little or no say on important issues within their communities, and trust in government is declining.

---

[4] A notable exception would be CSIRO's Australian National Outlook 2015 which focuses on economic activity, resource use, environmental performance and living standards, centred on the 'water-food-energy' nexus. http://www.csiro.au/nationaloutlook/
[5] https://www.sdgtransformingaustralia.com

By using an SDG lens, Australia's economic, social and environmental performance can be assessed in a holistic way, highlighting the complex interlinkages and interactions at play across these different policy domains. Addressing Australia's challenges requires an integrated, coherent and long-term approach. The SDGs can and should provide impetus for Australia to put in place a bi-partisan vision and pathway for a smart, clean and fair society by 2030.

c. What governance structures and accountability measures are required at the national, state and local levels of government to ensure an integrated approach to implementing the SDGs that is both meaningful and achieves real outcomes.

There is a considerable volume of literature relating to the governance structures, institutions and accountability mechanisms to promote sustainable development. For example, a broad range of guidelines and toolkits on national sustainable development planning were published prior to the adoption of the SDGs which provide guidance for sustainable development implementation, in particular in the areas of integrated or sustainability assessment[6], low-carbon or climate resilient development[7], nexus-based approaches[8], as well as green growth or green economy[9]. Many of these guidelines draw upon emerging concepts and methodologies from the social and sustainability sciences, providing a step-by-step approach to national implementation which is based on decision theory and the generic steps of the policy cycle. They also recommend a range of approaches to support implementation through the establishment of high-level coordination mechanisms, tiered planning arrangements, and platforms for multi-stakeholder consultation.

More recently, a range of new guidelines and toolkits have been developed specifically to support SDG implementation, and initiatives are underway to assist countries to integrate the SDGs into their national development plans and sectoral strategies. For example, since the adoption of the SDGs, several new guidelines for getting started on implementing the SDGs have emerged (Global Mechanism of the United Nations Convention to Combat Desertification, 2016; Institute for Global Environmental Strategies, 2015; Organisation for Economic Cooperation and Development, 2016a; Sustainable Development Solutions Network, 2015a; United Nations Development Group, 2015, 2017a, b; United Nations Institute for Training and Research, 2016). They provide guidance on how to take stock of a country's current performance on sustainable development, set national priorities, select targets and indicators, convene stakeholder dialogues, establish governance arrangements, prepare national roadmaps and SDG strategies, and provide tools to support the design of goal-based strategies and the tracking of their progress through monitoring and reporting.

This expert literature highlights several governance elements that are broadly promoted to provide an enhanced institutional framework for the SDGs that could be considered for Australia:
- **Adoption of a tiered planning structure**: comprising a long-term national vision with an agreed set of priority 2030 targets and indicators of particular relevance for Australia, and regular monitoring and reporting (e.g. every 3 years); mainstreaming of relevant targets into existing or

---

[6] European Commission, 2009. Impact Assessment Guidelines. European Commission, Brussels.; United Nations Environment Programme, 2009. Integrated Assessment: Mainstreaming Sustainability into Policymaking. UNEP, Nairobi.

[7] United Nations Development Programme, 2011. Preparing Low-Emission Climate-Resilient Development Strategies. UNDP, New York.; Organisation for Economic Cooperation and Development, International Energy Agency, 2010. Low Emission Development Strategies. OECD, Paris.; Climate Works Foundation, European Climate Foundation, 2009. Low Carbon Growth Plans: Advancing Good Practice. Climate Works, London.; Swanson, D., Bhadwal, S., 2009. Creating Adaptive Policies - A Guide for Policy-Making in an Uncertain World. International Institute for Sustainable Development, Otawa.

[8] United Nations Food and Agricultural Organisation, 2014. Walking the Nexus Talk: Assessing the Water-Energy-Food Nexus, Rome.

[9] Green Growth Best Practices, 2014. Green Growth Best Practice: Synthesis of key findings, Republic of Korea.; United Nations Environment Programme, 2014a. A Guidance Manual for Green Economy Policy Assessment, Nairobi.; United Nations Environment Programme, 2014b. Using Models for Green Economy Policymaking, Nairobi.; African Development Bank, Organisation for Economic Cooperation and Development, United Nations, World Bank, 2012. A Toolkit of Policy Options to Support Inclusive Green Growth. United Nations, New York.

- new medium-term sectoral plans and strategies with a regular review cycle; and the development of long- and medium-term spatial plans for state/local implementation of the national vision and sectoral strategies.
- **Mechanisms for enhancing coordination and coherence**: high-level governance mechanisms for ensuring coordination, steering, oversight and accountability across ministries (horizontal) and across levels of government (vertical). For example, through establishment of a planning commission or sustainable development commission, chaired by the head of state.
- **Mechanisms for national ownership and engagement**: a formalised national multi-stakeholder council or advisory body (e.g. National Sustainable Development Council) as well as national forums and dialogues in early visioning and priority-setting stages.
- **Mechanisms for enhancing data, monitoring and accountability**: to work with existing data and metadata reporting systems and to create coordinated online systems for information exchange, including reporting on key SDG indicators, and providing opportunities for both horizontal (inter-sectoral) and vertical coordination (Federal, State, local).

Australia's upcoming VNR will review Australia's progress on the SDGs, which should include an overview of the governance and institutional mechanisms that the Government has put in place to implement the agenda. At the national level, Australia has established a whole-of-government committee chaired by DFAT and PM&C to coordinate the VNR and support implementation, however it is not clear at this stage what role this committee will play in domestic implementation of the SDGs, and whether it has the authority and resources to fulfil this critical role. Australia established the National Sustainability Council in 2012 to report on Australia's progress on sustainable development, however it was subsequently abolished by the incoming conservative government. An independent National Sustainable Development Council was established in 2018 without funding or formal support by government, and intends to provide independent, authoritative and transparent assessments of Australia's progress towards the SDGs. We are not aware of any intention by Government to develop a national SDG strategy or vision document for Australia, or to define and adopt national targets. These are critical gaps that will undermine Australia's ability to respond to the SDGs, as well as our ability to measure and report on progress over time.

Guidance from the scientific community to support initial implementation of the SDGs recommends that the first step should be to undertake a national 'stocktake', including a baseline assessment of a limited set of economic, social and environmental indicators (Sustainable Development Solutions Network, 2015b). The objective is to discern where a country is lagging behind in terms of progress and to better identify and adapt a limited set of priority goals and targets to national circumstances. Initial baseline assessments and stocktakes are then followed by an SDG prioritisation exercise, including coordination, dialogue, target selection, and establishing statistical and reporting systems (Sustainable Development Solutions Network, 2015a). Australia remains at an early stage in completing these initial steps, however the recent completion of a draft SDG baseline for Australia[10] by the National Sustainable Development Council is pushing the envelope in this regard, offering an expert assessment of Australia's progress across over 130 indicators.

---

[10] https://www.sdgtransformingaustralia.com/

d. How can performance against the SDGs be monitored and communicated in a way that engages government, businesses and the public, and allows effective review of Australia's performance by civil society.

Reporting on progress against the SDG indicators will be a fundamental component of Australia's response to the global agenda. We have learned from experience that there are many challenges and obstacles to coherent reporting and communication of progress on the SDGs. Firstly, Australia is an advanced economy and many of the global indicators are designed for monitoring challenges faced by developing countries. They therefore lack relevance for Australia and are unlikely to ignite the public interest and imagination. Secondly, the agenda is so broad and complex that it can be difficult to distil clear messages and communicate them in a meaningful and readily consumable way.

A recent review of 26 VNRs submitted to the HLPF by a range of developed and developing countries highlights that countries are adopting different approaches to monitor and report on the SDGs (Allen et al., 2018a). Overall, it found that most countries were putting in place monitoring arrangements for reporting and follow-up to the SDGs (such as reviewing data availability, or establishing online data portals), however many countries had failed to complete a comprehensive baseline assessment of progress. In this context, it is important to highlight the distinction between a data reporting platform and an indicator-based assessment of progress. Data portals provide access to national trend data on SDG indicators[11], but generally provide no assessment or interpretation of this data.

On the other hand, indicator-based assessment is the process by which information on indicators is interpreted and synthesised to assess progress and produce clear messages for policy makers, the public and other stakeholders (Eurostat, 2014). In the context of the SDGs, this corresponds to clear messages on trends and progress against the goals and targets. Simply put, baseline assessments compare the observed evolution and status of an indicator against its desired evolution, as determined by a numerical target value or relevant benchmark. This comparison enables an interpretation of progress, which is generally categorised into classes using pre-determined threshold values (e.g. positive, neutral, negative). By presenting the assessment results with intuitive symbols (e.g. arrows, traffic lights, weather symbols), the information contained in the results can be condensed, and easily accessed and interpreted. There is great scope for using such approaches for reporting on the SDGs and exploring innovative and creative ways of visualising and communicating data and information to inspire the public's interest and imagination.

Assessments can be done at the level of individual indicators, for groups of indicators (e.g. a dashboard), or in an aggregated manner (e.g. composite indices or aggregated dashboards). A common approach is the preparation of an indicator dashboard that provides a tabular summary of the results of the assessment and is presented as an intuitive communication tool. There is no 'best' method, and each has its advantages and limitations. The methods are not mutually exclusive and can be combined in an assessment or adapted on a case-by-case basis. In all cases, it's important to communicate clearly and transparently how the indicators were assessed and why the approach was adopted.

The draft SDG baseline assessment for Australia[12] is an example of an indicator-based assessment of Australia's progress on the SDGs, with results compiled in a dashboard table as well as integrated into a website. Similar assessments have been undertaken in other countries and regions, most notably in Canada (McArthur and Rasmussen, 2017), Europe (Eurostat, 2017), OECD countries

---

[11] For example, the UK's SDG reporting platform at https://sustainabledevelopment-uk.github.io/1-2-1/),
[12] https://www.sdgtransformingaustralia.com/

(Organisation for Economic Cooperation and Development, 2016b), and at the global level (Sachs et al., 2017; Schmidt-Traub et al., 2017). At the global level, Australia was included in the global assessment of national SDG performance conducted through the SDG Index[13] developed by the Sustainable Development Solutions Network. There is considerable scope to further develop Australia's SDG baseline by working with a broad range of stakeholders and engaging with the Australian Government's formal role in reporting to the UN.

f. Which of the SDGs is Australia best suited to achieving through our ODA program, and should Australia's ODA be consolidated to focus on achieving core SDGs.

The SDGs are very broad and cater for a broad agenda of socio-economic and environmental aspects of sustainable development. As such, it is anticipated that Australia's existing ODA program and priorities could be aligned and articulated under the framework of the SDGs, effectively advancing the implementation of SDG 17 in Australia, and in tandem, assist developing countries in the implementation of core SDGs.

A potential area for further effort relates to building or enhancing the statistical and technical capacity to enable countries to collect high quality data, and to report on the SDGs. Australia has considerable statistical capabilities and expertise, and greater assistance in these areas should be a key feature of Australia's ODA program in the Indo Pacific region. In addition, it has best practice examples of using data from earth observation and geospatial information, that could be used for supporting and tracking progress of the SDGs (Metternicht et al., 2017). Technology and knowledge transfer will enable countries to monitor and report on the SDGs, and will also enable Australia to benchmark and measure the success or otherwise of its ODA program in these countries.

In the Pacific region, Australia has a program focusing on statistical capacity building. However, funding has declined in recent times. Australia should continue to work with other technical partners in the region (e.g. the Secretariat of the Pacific Community, World Bank, International Monetary Fund and the UN) to ensure that countries have the capacity in-house or can access the necessary capacity as needed to collect, process and disseminate data and statistics needed to report on the SDGs. In particular, the SDGs significantly expand the demand for environmental data which remains an area of limited capacity in the Pacific region and elsewhere.

g. How countries in the Indo-Pacific are responding to implementing the SDGs, and which of the SDGs have been prioritised by countries receiving Australia's ODA, and how these priorities could be incorporated into Australia's ODA program.

Most countries in the region are in the early stages of implementation of the SDGs. For example, under the leadership of the Pacific Island Forum (PIF) SDG Taskforce, the Pacific region has developed a Pacific Roadmap for Sustainable Development (PRSD) which aims to tailor the global 2030 Agenda to the Pacific context. The PRSD was endorsed by PIF Leaders in September 2017 and highlights the importance of integrating implementation into existing national and regional planning, monitoring and reporting processes. The draft implementation strategy includes a menu of 132 SDG indicators, which were prioritised as most appropriate to the Pacific context, as agreed through various multi-stakeholder forums[14]. The intention is for individual Pacific countries to select indicators from the regional menu, which align with their own development priorities and information needs.

---

[13] http://www.sdgindex.org/

[14] Cameron Allen was involved in this process working for the Australian Bureau of Statistics.

In a region such as the Pacific, there is limited capacity to report on 232 global indicators. As such, this initial prioritisation process is critical and should be encouraged. It is important that the SDGs are adapted to regional and national circumstances to ensure that they are relevant and implementable. However, these processes should be country-driven and based on a robust prioritisation process using available evidence and sound analysis. It is likely that further prioritisation will be needed as reporting on the reduced set of 132 indicators may also prove unrealistic in the Pacific.

h. Examples of best practice in how other countries are implementing the SDGs from which Australia could learn.

A major challenge to advancing sustainable development in the past has been the lack of methodologies that enable a comprehensive, multi-dimensional, and dynamic perspective, as well as tools to evaluate the trade-offs and interactions among the economic, social and environmental dimensions of development (Scrieciu, 2007). The result has been that many sustainability interventions in the past have targeted highly tangible, but essentially weak, leverage points (i.e. interventions that are easy, but have limited potential for transformational change) (Abson et al., 2017). It is therefore critical that national implementation of the SDGs is based upon sound evidence and science, taking advantage of contemporary approaches from the sustainability sciences including systems thinking and analysis and quantitative modelling (Allen et al., 2016; Collste et al., 2017; Le Blanc, 2015; Nilsson et al., 2016; Stafford-Smith et al., 2017).

Implementation of the SDGs framework commenced at the beginning of 2016, and there is emerging international practice and a growing catalogue of related reviews, assessments, guidelines and scientific publications (Allen et al., 2018a). At the global and regional level, research and implementation has included indicator-based assessments and benchmarking (Allen et al., 2017; Campagnolo et al., 2016; Eurostat, 2017; Kroll, 2015; McArthur and Rasmussen, 2017; Organisation for Economic Cooperation and Development, 2016b; Schmidt-Traub et al., 2017; United Nations, 2016; United Nations Economic and Social Commission for Western Asia and United Nations Environment Programme, 2015), the development and demonstration of systems approaches and models to analyse interlinkages between targets (Allen et al., 2018b; Collste et al., 2017; Gao and Bryan, 2017; International Council for Science, 2015, 2017; Le Blanc, 2015; Nilsson et al., 2016; United Nations Economic and Social Commission for Asia and the Pacific, 2016), and the provision of guidelines and toolkits to support initial stages of SDG implementation and mainstreaming (Guppy, 2017; Institute for Global Environmental Strategies, 2015; Organisation for Economic Cooperation and Development, 2016a; Sustainable Development Solutions Network, 2015a; United Nations Development Group, 2017b; United Nations Institute for Training and Research, 2016).

A range of approaches and tools are recommended by experts, including indicator-based assessments, benchmarking, target mapping, and systems analysis techniques (International Council for Science, 2017; Sustainable Development Solutions Network, 2015a; United Nations Development Group, 2017b). Each of these approaches can inform different stages of the policy cycle and provide useful information and evidence to support decision making.

Importantly, the emerging SDG literature and guidelines recognise that moving from the MDGs to the SDGs requires a shift in emphasis, from addressing goals in developing countries that are lagging furthest behind, to identifying actions for all countries (both developed and developing) to move forward more quickly across a broader range of interlinked goals (Organisation for Economic Cooperation and Development, 2016a; United Nations Development Programme, 2016).

At the national level, most countries have commenced implementation of the SDGs. These efforts are documented in the early VNRs submitted to the HLPF in 2016 and 2017[15], with 66 countries reporting on progress in the first 18 months of implementation. In addition, some developed countries have published further reviews and research on their approach to the SDGs and national progress, including Sweden and Canada (McArthur and Rasmussen, 2017; Weitz et al., 2017; Weitz et al., 2015). Australia is one of 47 countries submitting a VNR in 2018.

As an initial step, many countries are turning their attention to prioritisation of the SDGs and adaptation of targets and indicators to national circumstances. This is a critical implementation stage, and there is a considerable risk that countries will adopt arbitrary approaches to prioritisation and/or pursue the same 'siloed' approaches that have met with limited success in the past. This would undermine the transformative potential of the SDGs. A key challenge remains the comprehensiveness and complexity of the goals and targets. There is a need for effective approaches that assist countries in reducing complexity by refining and prioritising a more manageable set of national targets.

Early reviews of the 2016 round of VNRs and early implementers of the SDGs undertaken by the international organisations provide some preliminary analysis regarding SDG implementation progress, approaches, challenges and gaps (Organisation for Economic Cooperation and Development, 2016a; United Nations Development Group, 2016; United Nations Division for Sustainable Development, 2017). These early reviews highlight that most countries have reported progress in establishing or strengthening institutional frameworks and governance arrangements for coordination and consultation on the SDGs. Another common approach taken by select countries was an assessment of the alignment of the SDGs with existing development plans and strategies (e.g. Finland, Philippines, Samoa, Sierra Leone, Turkey, Montenegro and Uganda), while some few countries reported incorporating the SDGs into new strategies (e.g. Colombia, Egypt, Mauritania, Somalia).

A recent review of both the expert and practitioner literature as well as the 2017 VNRs identifies the main initial steps that countries are taking to implement the SDGs (Allen et al., 2018a). This provides a useful reference point for Australia in terms of reviewing its progress on initial implementation of the SDGs (see **Table 1**). While Australia has made progress in some key areas, thanks largely to its commitment to prepare a VNR, it lacks a coherent and articulated, cross-sectoral response to the SDGs which could be assisted through the formalisation of an SDG planning process.

Table 1: Initial steps in SDG implementation and Australia's progress

Common steps taken by countries[16]	Australia's progress
All countries had established **governance and coordination mechanisms** to support input and coordination across government. These were typically chaired by head of state portfolios.	Whole-of-government coordination committee established chaired by DFAT and PM&C.
All countries had undertaken **multi-stakeholder consultations** on the SDGs, mostly to facilitate input to the VNRs.	Two national, multi-stakeholder SDG summits in 2016 and 2018 coordinated by the non-government sector, with financial support from DFAT. Several other consultation processes on specific goals.
Most countries had undertaken an initial **SDG mapping exercise**, to assess alignment of existing strategies and policy frameworks to the SDGs and identify gaps.	

---

[15] https://sustainabledevelopment.un.org/vnrs/
[16] Based on a review of 26 countries. Allen, C., Metternicht, G., Wiedmann, T., 2018a. Initial progress in implementing the Sustainable Development Goals (SDGs) - A review of evidence from countries. Sustainability Science Manuscript submitted October 2017 and under consideration.

Most countries were putting in place **monitoring and review arrangements**, typically led by national statistical offices.	Establishment of monitoring and review arrangements is underway as part of the VNR.
Less than 50% of countries had undertaken a process to **prioritise and adapt SDG targets** and indicators to national circumstances.	
Less than 40% of countries had completed **an SDG baseline assessment**, with less than 20% using targets or benchmarks to evaluate progress.	A draft, independent national baseline assessment completed by National Sustainable Development Council. Australia was also assessed in the global SDG Index. Government assessment underway as part of VNR.
Around one third of countries had developed an **SDG road map or plan** (e.g. Belgium, Denmark, Japan, Malaysia, and Thailand).	
Several countries had highlighted the need for an integrated approach to the SDGs and **consideration of interlinkages and interactions** between targets, however this remained a gap across all countries.	

The OECD recently conducted a survey on implementation of the SDGs amongst its members[17] which highlights that the key perceived benefits of planning for SDG implementation relate to the opportunity to better align policies across sectors (coherence) and the long-term planning horizon. Similarly, the key challenges identified relate to the broad scope and cross-cutting nature of the SDGs and difficulties associated with coordination and resourcing. Interestingly, the tool identified by OECD countries as the most effective for supporting national SDG implementation was adapting and prioritising the SDGs to national priorities and context.

The results of the survey confirm that an effective response to the SDGs in Australia will require: a clear coordination role and mandate for the centre of government (PM&C); initial prioritisation and adaptation of the SDGs to national circumstances and priorities through a robust and consultative process; and a coherent, long-term vision and response that is clear and measurable and accompanied by regular reporting. These could be enabled through a national planning exercise to develop an SDG roadmap or strategy that is led by PM&C, broadly consultative, and that adopts an evidence-based approach and methodology for prioritisation.

The SDGs are inherently complex and new research is emerging on how to use systems thinking and analysis to support national target prioritisation (Nilsson et al., 2016; Weitz et al., 2017). However, further practical research and experience is greatly needed. Our forthcoming paper sets forth an integrated assessment approach to support the prioritisation and adaptation of SDG targets by countries that could be further developed and applied in Australia (Allen et al., 2018b). The approach applies a multi-criteria analysis (MCA) decision framework to assess and prioritise targets based upon their 'level of urgency', 'systemic impact', and 'policy gap'. A range of complementary evidence- and science-based approaches are applied within the assessment framework, including: baseline assessment and benchmarking, systems analysis and network analysis techniques, and systematic target mapping and policy gap analysis.

The Organisation for Economic Cooperation and Development (2016a) has also prepared guidance on enabling policy coherence for the SDGs. The focus is on improving understanding of interactions across SDGs and identifying policy coherence issues, as well as aligning existing institutional mechanisms to enhance policy coherence and develop a national vision. With regard to assessing SDG interlinkages, they propose several steps such as mapping out the critical interactions across the

---

[17] https://www.oecd.org/gov/cob-sdg-survey-overview-of-results.pdf

SDG targets through an expert consultation process and applying network analysis approaches. This could provide further guidance for Australia for SDG implementation.

There is growing interest in the SDGs in Australia and considerable technical, financial and practical capabilities available across government, business, civil society and the research community to support implementation. A key gap at present remains national leadership on the SDGs to mobilise these resource towards an integrated, coherent and ambitious national agenda for a smart, clean, and fair Australia by 2030 and beyond.

References

Abson, D.J., Fischer, J., Leventon, J., Newig, J., Schomerus, T., Vilsmaier, U., von Wehrden, H., Abernethy, P., Ives, C.D., Jager, N.W., 2017. Leverage points for sustainability transformation. Ambio 46, 30-39.

African Development Bank, Organisation for Economic Cooperation and Development, United Nations, World Bank, 2012. A Toolkit of Policy Options to Support Inclusive Green Growth. United Nations, New York.

Allen, C., Metternicht, G., Wiedmann, T., 2016. National pathways to the Sustainable Development Goals (SDGs): A comparative review of scenario modelling tools. Environmental Science & Policy 66, 199-207.

Allen, C., Metternicht, G., Wiedmann, T., 2018a. Initial progress in implementing the Sustainable Development Goals (SDGs) - A review of evidence from countries. Sustainability Science Manuscript submitted October 2017 and under consideration.

Allen, C., Metternicht, G., Wiedmann, T., 2018b. Prioritising SDG targets: assessing baselines, gaps and interlinkages. Manuscript currently under review for publication by Sustianability Science journal.

Allen, C., Nejdawi, R., El-Baba, J., Hamati, K., Metternicht, G., Wiedmann, T., 2017. Indicator-based assessments of progress towards the sustainable development goals (SDGs): a case study from the Arab region. Sustainability Science, 1-15.

Campagnolo, L., Carraro, C., Eboli, F., Farnia, L.L., 2016. Assessing SDGs: a new methodology to measure sustainability.

Climate Works Foundation, European Climate Foundation, 2009. Low Carbon Growth Plans: Advancing Good Practice. Climate Works, London.

Collste, D., Pedercini, M., Cornell, S.E., 2017. Policy coherence to achieve the SDGs: using integrated simulation models to assess effective policies. Sustainability Science, 1-11.

European Commission, 2009. Impact Assessment Guidelines. European Commission, Brussels.

Eurostat, 2014. Getting messages across using Indicators: A handbook based on experience from assessing Sustainable Development Indicators, Luxembourg.

Eurostat, 2017. Sustainable Development in the European Union: Monitoring report on progress towards the SDGs in an EU context, Luxembourg.

Gao, L., Bryan, B.A., 2017. Finding pathways to national-scale land-sector sustainability. Nature 544, 217-222.

Global Mechanism of the United Nations Convention to Combat Desertification, 2016. Achieving Land Degradation Neutrality at the country level, Building blocks for LDN target setting. UNCCD, Bonn, Germany.

Green Growth Best Practices, 2014. Green Growth Best Practice: Synthesis of key findings, Republic of Korea.

Guppy, L., 2017. Accelerating Water-Related SDG Success; 6 Steps and 6 Components for SDG 6, UNU-INWEH Policy Brief, Issue 4. United Nations University Institute for Water Environment and Health, Canada.

Institute for Global Environmental Strategies, 2015. Achieving the Sustainable Development Goals: From Agenda to Action. Institute for Global Environmental Strategies, Kanagawa, Japan.

International Council for Science, 2015. Review of Targets for the Sustainable Development Goals: the science perspective.

International Council for Science, 2017. A Guide to SDG Interactions: From Science to Implementation.

Kroll, C., 2015. Sustainable Development Goals: Are the rich countries ready. Guetersloh: Bertelsmann Stiftung.

Le Blanc, D., 2015. Towards Integration at Last? The Sustainable Development Goals as a Network of Targets. Sustainable Development 23, 176-187.

McArthur, J.W., Rasmussen, K., 2017. Who and what gets left behind? Assessing Canada's domestic status on the Sustainable Development Goals, Global Economy & Development, Working Paper 108.

Metternicht, G., 2018. Land Use Planning for Advancing Internationally Agreed Development Goals, Land Use and Spatial Planning. Springer, pp. 53-59.

Metternicht, G., Held, A., Cristensen, B., Kerblat, F., Sims, N., Guershman, J., 2017. Earth Observation For Supporting And Tracking Progress Of Sustainable Development Goals: Best Practice Example From The Australian Terrestrial Ecosystem Research Network (TERN), 37th International Symposium on Remote Sensing of Environment 8-12 May 2017, Tshwane, South Africa.

Nilsson, M., Griggs, D., Visbeck, M., 2016. Map the interactions between Sustainable Development Goals. Nature 534, 320-322.

Organisation for Economic Cooperation and Development, 2016a. Better Policies for Sustainable Development 2016: A New Framework for Policy Coherence. Organisation for Economic Cooperation and Development, Paris.

Organisation for Economic Cooperation and Development, 2016b. Measuring distance to the SDGs Targets: A pilot assessment of where OECD countries stand. Organisation for Economic Cooperation and Development, Paris.

Organisation for Economic Cooperation and Development, International Energy Agency, 2010. Low Emission Development Strategies. OECD, Paris.

Sachs, J., Schmidt-Traub, G., Kroll, C., Durand-Delacre, D., Teksoz, K., 2017. SDG Index and Dashboards Report 2017. Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN): New York, NY, USA.

Schmidt-Traub, G., Kroll, C., Teksoz, K., Durand-Delacre, D., Sachs, J.D., 2017. National baselines for the Sustainable Development Goals assessed in the SDG Index and Dashboards. Nature Geoscience.

Scrieciu, S., 2007. The inherent dangers of using computable general equilibrium models as a single integrated modelling framework for sustainability impact assessment. A critical note on Böhringer and Löschel (2006). Ecological Economics 60, 678-684.

Stafford-Smith, M., Griggs, D., Gaffney, O., Ullah, F., Reyers, B., Kanie, N., Stigson, B., Shrivastava, P., Leach, M., O'Connell, D., 2017. Integration: the key to implementing the Sustainable Development Goals. Sustainability Science 12, 911-919.

Sustainable Development Solutions Network, 2015a. Getting Started with the Sustainable Development Goals: a guide for stakeholders, New York.

Sustainable Development Solutions Network, 2015b. Indicators and a Monitoring Framework for the Sustainable Development Goals, A report to the Secretary-General of the United Nations by the Leadership Council of the Sustainable Development Solutions Network, New York.

Swanson, D., Bhadwal, S., 2009. Creating Adaptive Policies - A Guide for Policy-Making in an Uncertain World. International Institute for Sustainable Development, Otawa.

United Nations, 2016. The Sustainable Development Goals Report 2016, New York.

United Nations Development Group, 2015. Mainstreaming the 2030 Agenda for Sustainable Development: Interim Reference Guide to UN Country Teams.

United Nations Development Group, 2016. The Sustainble Development Goals are Coming to Life, Stories of country implementation and UN support. United Nations, New York.

United Nations Development Group, 2017a. Guidelines to support country reporting on the SDGs. United Nations, New York.

United Nations Development Group, 2017b. Mainstreaming the 2030 Agenda: Reference Guide for UN Country Teams, New York.

United Nations Development Programme, 2011. Preparing Low-Emission Climate-Resilient Development Strategies. UNDP, New York.

United Nations Development Programme, 2016. UNDP Support to the Implementation of the 2030 Agenda for Sustainable Development, UNDP Policy and Programme Brief. United Nations, New York.

United Nations Division for Sustainable Development, 2017. Synthesis of Voluntary National Reviews 2016. United Nations, New York.

United Nations Economic and Social Commission for Asia and the Pacific, 2016. Analytical Framework for Integration of Water and Sanitation SDGs and Targets Using a Systems Thinking Approach: Working Paper, Bangkok.

United Nations Economic and Social Commission for Western Asia, United Nations Environment Programme, 2015. Arab Sustainable Development Report, Beirut.

United Nations Environment Programme, 2009. Integrated Assessment: Mainstreaming Sustainability into Policymaking. UNEP, Nairobi.

United Nations Environment Programme, 2014a. A Guidance Manual for Green Economy Policy Assessment, Nairobi.

United Nations Environment Programme, 2014b. Using Models for Green Economy Policymaking, Nairobi.

United Nations Food and Agricultural Organisation, 2014. Walking the Nexus Talk: Assessing the Water-Energy-Food Nexus, Rome.

United Nations Institute for Training and Research, 2016. Preparing for Action - The 2030 Agenda for Sustainable Development: Learning Manual.

Weitz, N., Carlsen, H., Nilsson, M., Skånberg, K., 2017. Towards systemic and contextual priority setting for implementing the 2030 Agenda. Sustainability Science, 1-18.

Weitz, N., Persson, Å., Nilsson, M., Tenggren, S., 2015. Sustainable Development Goals for Sweden: Insights on Setting a National Agenda. Stockholm: Stockholm Environment Institute.