Waste and Resources Action Programme (WRAP)
Asia-Pacific

Response to

Australia's circular economy: Unlocking the opportunities

Interim Report

11th April 2025

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The Chair
Australian Government Productivity Commission

Thank you for the opportunity to submit constructive feedback on the Productivity Commission's 'Australia's circular economy: Unlocking the opportunities' Interim report, and to provide national to international best practice examples and opportunities to accelerate the benefits of the circular economy in Australia.

WRAP is a global environmental action NGO catalysing policy makers, businesses and citizens to transform the systems that generate food, textiles and manufactured products to create Circular Living. For over twenty years, WRAP has delivered programs across the globe that reduce CO2 and waste, restore nature, and change people's behaviour. WRAP is on the side of the doers, bringing together businesses, NGOs and governments to create the systemic change our planet and communities desperately need. Headquartered in London, UK, we have offices in Adelaide, Banbury, Belfast, and Washington DC, while delivering projects in more than 50 countries and working with more than 1,000 businesses globally.

Opening two years ago, our Asia Pacific (APAC) office is driving change in the region by bringing international best practice and funding to support Pacts and Voluntary Agreements in Australia, New Zealand, and Indonesia, and delivering transformational projects in Fiji and Indonesia. Our APAC team funnels our global expertise to local stakeholders, while sharing the Australian and wider regional successes with our global networks.

Over the last 20 years we have delivered lasting impact. We have multiple international pacts and partnerships, and we work with governments and governmental organisations around the world. We're known for delivering value and impact for our funders with significant return on investments made with us. We also have a history of empowering citizens to take action — creating real, sustainable behaviour change in the communities we work in, with and for. With our strong history of technical expertise, an impartial evidence-base, and independent convening power, WRAP is perfectly placed to work with government, industry and the community to drive the circular economy in Australia. As such, we have responded to information requests for Chapters 4-6 and 9-10 to support the inquiry's final recommendations. Many of the international examples that we provide have been / can be adapted to Australia, allowing for reduced costs and efforts in implementing circular economy practices in Australia.

WRAP is available to discuss any of our responses provided herein.

Yours sincerely,

Stephanie Downes

Executive Director for WRAP Asia-Pacific

Chapter 4: The built environment

WRAP Response to Information Request 4.1

PC specific information request	WRAP response
The PC is seeking information on: • prescriptive versus performance-based standards: - specific examples where prescriptive standards or specifications for infrastructure construction significantly inhibit the use of recycled materials - what other benefits or objectives these prescriptive standards are intended to achieve (for example, public safety, or to enable clarity for smaller businesses) - ways that various levels of governments could facilitate greater use of performance-based standards - challenges, costs and benefits, and implementation issues that need to be considered if moving from prescriptive to performance-based standards (for example, monitoring and enforcement) *WRAP has chosen not to respond to the remaining information requests in 4.1.*	In Australia, WRAP recognises the significant work in standards done at the jurisdictional level, such as Ecologiq in Victoria. Globally, WRAP's experience is that an objective of prescriptive standards and specifications can be to promote, rather than inhibit, recycled content. A specific example of prescriptive standards for infrastructure construction is WRAP's Low-carbon construction guidance (2022) which contains prescriptive targets around recycled content, waste reduction from landfill etc. For example, in London, Crossrail set targets of 15% recycled content, with a stretch goal of 20%, in its construction materials. There are two examples of Governments that have an objective of prescriptive standards to promote the use of recycled content. Firstly, the Scottish Executive has recommended that public bodies include a minimum of 10% recycled content in projects over £1 million. Secondly, the Social Partnerships and Public Procurement (Wales) Act (2023) (Social Partnership and Public Procurement (Wales) Act | GOV.WALES) which introduces statutory duties on public bodies in Wales to consider socially responsible procurement and to set procurement objectives in relation to The Well-Being Act goals. Welsh Government has signposted to and used existing WRAP guidance on setting targets for avoidance of waste to landfill and inclusion of recycled content. It is our understanding that Welsh Government intends to draft model clauses and guidance to assist public bodies to meet these goals, in relation to procurement of construction projects for over £2 million. Australia could look to this Act and guidance as an example of international best practice, with a view to incorporating this into government procurement criteria across Australia.

WRAP Response to Information Request 4.2

PC specific information request	WRAP response
• the benefits and costs associated with introducing or expanding government-led coordination initiatives to support public procurement policies in different jurisdictions *WRAP has chosen not to respond to the remaining information requests in 4.2.*	WRAP has two examples of the benefits and costs of government-led coordination of public procurement policies (one Welsh and one UK-wide), which provide valuable insight and learnings for Australia. **Welsh example**: To achieve a net-zero public sector in Wales by 2030, the Welsh Government has coordinated initiatives to help public sector bodies. Since 2016, WRAP has partnered with Welsh Government to offer a suite of public sector sustainable procurement services: from individual procurement support and providing tools, guides and frameworks to changing system-wide culture via a Sustainable Procurement Maturity Review, normalizing and embedding sustainable procurement in everyday practice. The benefit of this long-term approach is that since 2016, WRAP has influenced more than £1bn (AUD $2.1bn) of procurement out of a total of £8bn (AUD $16.8bn) public sector spend, with more than £2.4bn (AUD $5bn) being influenced in 2023/24. An external evaluation of WRAP's public sector sustainable procurement work showed a cost benefit analysis of £1:£12.49 return for every £1 invested by government. **UK-wide example:** WRAP's **Highways: Waste less and save money - Procurement good practice for highways construction and maintenance guide (available upon request)** shows that a benefit of sustainable procurement practices for government departments is the reduction of costs and carbon emissions; the achievement of targets; and the linking of infrastructure management with other policies (e.g. planning or waste policies), demonstrating integrated action. WRAP calculated the cost saving potential of waste reduction and recovery in the UK £38 million project to build a A34/M4 highway junction: • 25,850 tonnes of recycled asphalt plannings as 50% addition to imported subbase material – saving £50,400 (AUD$105,000); • 17,100 tonnes of recycled asphalt from site recovered as 100% composition of subbase material saving £74,400 (AUD$154,000); • 1,850 tonnes of recycled aggregate as 10% of imported capping materials saving £3,600 (AUD$7,500); • 2,580 tonnes of recycled asphalt plannings from site recovered as 100% composition of capping material saving £11,200 (AUD$23,300); • 7,650 tonnes of soil stabilised as capping – saving £33,250 (AUD$69,000); and • 8,700 tonnes of recycled asphalt plannings from site recovered as 10% addition to base and binder course layers at no additional cost. These positive benefits and cost could be realised in Australia with suitable government-led coordination. We are open to further discussion on how to realise these, based on our global experience.

WRAP Response to Information Request 4.3

WRAP has chosen not to comment on Information Request 4.3.

WRAP Response to Information Request 4.4

PC specific information request	WRAP response
The PC is seeking the following information on government assessment of public infrastructure projects, and integrated planning: • any examples of infrastructure investment decisions proceeding without adequate integrated planning or assessment, which have led to significant unnecessary materials use and waste that may otherwise have been avoided • the extent to which and ways in which improving assessment of public infrastructure projects could reduce materials use and waste, including quantitative analysis of costs and benefits (where available) • barriers preventing further adoption of integrated urban planning, which governments could address. *WRAP has chosen not to respond to the remaining information requests in 4.4.*	WRAP provides the following examples for consideration of the extent to which and ways in which improving assessment of public infrastructure projects in Australia could reduce materials use and waste. WRAP's Guide **Low Carbon & Resource Efficient Construction Procurement (WRAP 2022)**, highlights that the built environment accounts for 39% of global carbon emissions. Construction works and materials alone represent 11% of global emissions. Whilst significant improvements have been made in operational energy efficiency of buildings, there is growing recognition of the need to tackle embodied carbon arising from the construction cycle - namely, carbon impacts arising from material extraction, processing, transportation, manufacture use, construction works and disposal of construction products. Our Guide gives examples of how public sector procurement across the built environment lifecycle, through design, construction, renovation, demolition, or facilities management can enable a reduction in these impacts, through the implementation of **sustainable procurement hierarchy principles (WRAP 2021)**. WRAP's vast circular economy experience includes supporting the development and use of Site Waste Management Plans by the construction sector, which shows the importance of separating different types of construction waste, including various product types, on site, to lower the environmental impacts associated with management of site waste. Our most recent collaboration with the construction sector was the launch in June 2023 of **Our Shared Understanding: a circular economy in the built environment**, establishing a cocreated vision with the sector and highlighting the benefits gained from assessing ways to reduce material use and waste on infrastructure projects.

	WRAP's guidance **Delivering Effective Waste Minimisation - Technical Guidance for Construction Clients, Design Teams and Contractors**, (available on request) addresses ways to reduce physical waste generated on site, not wasted time and or money, albeit these are closely linked to the inefficient use of materials. The main sources of waste found in construction projects include: demolition material– site clearance often leads to disposal of large quantities of materials; damage to materials either during delivery or during storage on site (handling errors, inadequate storage, poor coordination with other trades); off-cuts of materials resulting from inefficient design and construction practices; design changes leading to reworking and wasted materials; temporary works materials (e.g. formworks, hoarding, etc); contamination of 'clean' waste; and packaging. To reduce waste the briefing, design, procurement, logistics and site activities, targeting waste generating activities in each phase must be assessed and reviewed. Best results are achieved when all members of the design and construction team work together to reduce waste through the construction process. Waste minimisation involves taking action to reduce these sources of waste. WRAP highlights four opportunities to reduce waste: communication; design; procurement; and logistics. WRAP has demonstrated how sustainable outcomes can be delivered through the public procurement of construction projects: **Sustainable Procurement Early Market Engagement Guide - Construction** (revised March 2025). The process of constructing a new build asset, undertaking a major renovation, or its ongoing maintenance and management, consists of a distinct sequence of procurement activities. This sequence can have a significant influence on the circularity and embodied carbon impacts and outcomes of a project – since each type of contract brings with it distinct interactions between the procurer, the building design team, contractors, future occupants and facility managers. Moreover, each contract offers different types of opportunity to procure improved circular performance. Early market engagement by public sector procurement can enable a reduction in carbon impacts associated with the sourcing, manufacture, use and disposal of construction products by implementing the materials These guides provide examples of best practice of reducing material use and waste by the construction industry when planning and delivering public infrastructure projects. These learnings can easily be applied to the Australian context. The above is part of WRAP's programme in the UK construction sector which led to wide scale environmental change through the development and execution of initiatives such as Halving Waste to Landfill. Over 800 companies signed the commitment to reduce waste, which led to 5 million tonnes of waste per year being diverted from landfill, and £400 million cost savings per year realised by companies involved. Similar benefits may be realised in Australia with a similar industry-wide approach.

Chapter 5: Food and agriculture

WRAP Response to Information Request 5.1

PC specific information request	WRAP response
The PC is interested in further information on the following matters: • specific regions or stages of food donation (collection, storage, distribution) where barriers and challenges arise	WRAP has substantial expertise in identifying and addressing the barriers and challenges associated with the collection, storage, and distribution stages of food redistribution and donation using our robust evidence-based approach and policy engagement. Key challenges and barriers (grouped by food donation stage) that have been identified and addressed through working with retailers, manufacturers, suppliers, food redistribution organisations, and with Food Pact secretariats and food redistribution networks globally (including Australia, Indonesia, UK and South Africa) are described in WRAP's Best practice on redistributing own-label products within the supply chain, Surplus Food Redistribution Guidance, and other documents found on the Surplus food redistribution resource hub. For example: Collection challenges: • Liability concerns: Businesses can be reluctant to donate surplus food due to concerns about legal liability if food is unsafe to eat and recipients fall ill. WRAP has worked closely with the UK government to develop clear guidance and encourage wider adoption of legal protections for good-faith food donors. • Lack of incentives: The absence of financial or regulatory incentives can discourage businesses from participating. The proposed Australian *Tax Laws Amendment (Incentivising Food Donations to Charitable Organisations) Bill 2024* is an example of an incentive that could address this barrier. • Transportation costs**:** High expenses associated with transporting surplus food from producers and retailers to food relief organisations hinder efficient collection. This is especially pronounced in rural and remote regions where distances are greater, and infrastructure may be lacking. The Parliament of Australia has identified that in areas such as East Arnhem Land, the high costs and logistical difficulties of transporting food contribute significantly to food insecurity. Western Australia faces similar issues. • Network gaps: In some localities, there are insufficient distribution stakeholders to manage the available surplus food. This may be due to a lack of redistributors in the area, or limited awareness among donors of the handling and storage capabilities of those within the redistribution network. WRAP's Best practice on redistributing own-label products within the supply chain promotes commitment within food redistribution and donation networks to greater transparency around the authorisation processes used by retailers for food surplus redistribution and donation, along with clearer communication of food safety and labelling practices. Increasing visibility into who can accept surplus food and under what conditions can unlock more opportunities for redistribution and donation at the local level.

	Storage challenges: • Infrastructure deficiencies: Many charitable donation organisations lack sufficient refrigeration or storage space, especially for perishable items. WRAP, in partnership with UK government and private partners, has provided funding and guidance to help organisations enhance their cold chain capabilities (Resource Action Fund) • Date labelling confusion: A major cause of avoidable food waste is misunderstanding around 'Best Before' and 'Use By' dates. WRAP's Surplus Food Redistribution Guidance clarifies labelling for donors, manufacturers, and redistributors, allowing more food to be safely and legally redirected to those in need. Distribution challenges: • Logistical complexity: Coordinating timely collection and delivery of surplus food can be constrained by a lack of transport or inefficient communication across the supply chain. WRAP works with businesses and charities to streamline logistics and improve food rescue coordination (Surplus Food Redistribution Guidance). • Policy fragmentation: Inconsistent or unclear policies can hinder redistribution/donation, especially where food safety standards, liability rules, or labelling requirements vary. WRAP has played a key role in harmonising guidance and advocating for enabling policies. Contractual challenges: • In Australia, the majority of products sold in our major supermarkets are not owned by the supermarkets, meaning that there potentially will be contractual challenges arising with what products they are able to give away. In our experience, these identified barriers and challenges can be addressed when government, industry and the community are convened and work together to release the economic, environmental and social benefits of food redistribution.
• the most significant kind of barriers faced by the food relief sector, including (but not limited to) coordination issues and infrastructure capacity constraints, and how these might be overcome	For more than 20 years WRAP has worked with the food relief sector to address the barriers and challenges around coordination issues, and infrastructure capacity constraints. The most significant kind of barriers have been identified and addressed through working with retailers, manufacturers, suppliers, and food redistribution organisations, and with Food Pact secretariats and food redistribution networks globally (including Australia, Indonesia, UK and South Africa). They include: • A lack of connectivity between donors (e.g. food manufacturers, retailers) and redistributors can result in missed opportunities to recover and redistribute edible food. In many areas, there are not enough redistribution and donation organisations with the right capabilities, or limited awareness among donors of how to engage them effectively. WRAP believes these barriers can be overcome through greater transparency around redistribution and donation networks

	and donor authorisation processes (Framework for effective redistribution partnerships). Retailers, for example, can play a central role by maintaining clear, publicly available criteria for which organisations are eligible to receive food surplus, including food safety and labelling expectations (Surplus food redistribution resource hub). • Many food relief organisations lack the infrastructure to handle large or time-sensitive food donations, especially chilled and frozen products. This limits the volume and type of food they can accept and distribute safely. WRAP supports co-investment in cold storage and logistics infrastructure, often via public-private partnerships such as the Resource Action Fund. Additionally, WRAP's redistribution resource hub offers tailored guidance for improving operational readiness among redistribution and donation partners. • Donating and redistributing own-label products presents unique barriers due to brand integrity concerns and inconsistent labelling. Retailers and brand owners want assurance that food bearing their brand is handled safely and distributed through trusted channels. In the UK, WRAP led a supply-chain wide consultation to develop Best practice on redistributing own-label products within the supply chain. This framework encourages all stakeholders to commit to a shared set of principles, including transparent agreements outlining who is authorised to receive and redistribute own-label products; clear protocols for managing labelling, including date coding and storage instructions; and defined food safety responsibilities and due diligence expectations. This document is now being adapted for use in Indonesia as part of the Food Pact work that WRAP APAC are supporting in partnership with the Indonesia Business Council for Sustainable Development's GRASP2030 (GRASP 2030 |) initiative. In Australia, WRAP APAC can work with End Food Waste Australia to adapt this document to the Australian Food Donation sector as a component of their Food Rescue Sector Action Plan. • Inconsistent application of date labels (e.g., 'Best Before" and "Use By"), lack of guidance on safe repackaging, and differing interpretations of food safety legislation can all result in food being unnecessarily discarded. WRAP has published comprehensive guidance to improve consistency in labelling, both for donors and redistributors (Surplus Food Redistribution Guidance). By clarifying regulatory requirements and promoting standard practices, this guidance enables more food to be safely and confidently redirected to those in need. In Australia, WRAP APAC can work with End Food Waste Australia to adapt this document in alignment with Australian regulatory requirements to the Australian Food Donation sector as a component of their Food Rescue Sector Action Plan.
• ways, and quantitative assessments of the costs and benefits (where available), governments can make food collection and distribution easier for small and/or geographically dispersed food	WRAP has substantial expertise in addressing mechanisms and conducting cost-benefit-analyses to inform government decision making about ways to make food collection and distribution easier for small and geographically dispersed food donation stakeholders. Based on our global experience, some of the ways in which governments can play a role include:

businesses and charities, including incentivising the use of private storage and transport infrastructure	• Providing financial incentives for infrastructure use. For example, grants/subsidies/support initiatives can encourage utilisation of private storage and transport facilities and can help small and/or geographically dispersed businesses expand cold storage and transportation capabilities (particularly to ensure safe storage/handling of perishable items) • Streamlining regulatory frameworks. For example, the Australian Government could: o Develop new, or improve existing, standards and best practice guidelines for food safety and labelling to facilitate donation in consultation with redistribution and donation stakeholders and in line with relevant National and State legislation such as FSANZ Food Standards Code, State and Territory legislation (Food Acts aligned with FSC, Civil Liability Act 2002 (NSW), Civil Liability Act 2003 (QLD), o Simplify compliance procedures for small businesses and charities to reduce administrative burdens • Empowering retailers or other stakeholders to authorise redistributors and their network to carry out certain functions and encourage commitment to best practice and data transparency/sharing (e.g., by developing template agreements as part of best practice guidelines). • Enhancing coordination and networking by: o Identifying/mapping regionally localised stakeholders to form redistribution and donation networks. o Developing publicly available platforms/networks to connect food donors with retailers (and other stakeholders). This would improve communication, commitment, and efficiency within donation networks. WRAP developed the Food surplus network to connect stakeholders in the UK. The Australian Government could use this as a guide to develop a similar platform in Australia. o Fostering partnerships between public and private sectors to leverage existing infrastructure and resources • Assisting with capacity building and support by: o Developing/implement training programs for best practices in food handling, storage and transportation for organisations involved in food donation o Providing/identifying technical assistance to help small entities navigate logistical challenges associated with food donation • Assisting with data collection and monitoring by: o Developing guidelines/templates/systems aligned with best practice for tracking surplus food quantities, distribution patterns, and recipient needs, o Using data to monitor the effectiveness of redistribution and donation networks and identify areas for improvement. In the UK, WRAP conducts Annual Surveys of Redistribution Organisations. The 2022 update indicated that: ▪ Total redistributed food increased by ~ 29,000 tonnes (27%) compared to 2021, equivalent to 70 million more meals redistributed.

	▪ More food was redistributed across all food storage types, with chilled and frozen foods seeing the highest growth across the last year at 34% and 20% respectively. ▪ Increased refrigeration and freezing capacity enabled charities to redistribute a wider range of foods from supermarkets, manufacturers and farms. WRAP recommends that consideration is given to reviewing the feasibility of these examples and which stakeholders in Australia are best placed to deliver them.
• examples of governments successfully playing a coordination role between food donors and food relief organisations in Australia or other countries.	A great example of the government playing a successful coordinating role between food doners and food relief organisations is the UK Resource Action Fund; (RAF) delivered by WRAP on behalf of the UK Department of Environment, Food and Rural Affairs (DEFRA). The RAF was an ~ AUD $35m grant fund to support resource efficiency projects aimed at reducing, diverting, and better managing waste across England. It provided support in food waste, plastics, textiles, recycling and litter. The objectives of the RAF Food Waste Grants were to utilise surplus food for human consumption, create valuable products from unavoidable food waste, and change consumer behaviour through education and engagement. Capital grants and in-kind contributions were provided, with grants targeted to the food sector and non-household municipal recycling activities. The grants enabled flexible use of private infrastructure (e.g., refrigerated storage, transport) and encouraged cross-sector partnerships. The impact of the food grants was the expected diversion of 30,446 tonnes of surplus food from being wasted; avoided 122,588 tonnes of CO2e emissions, and the creation of 29 new FTEs. A successful project was delivered by His Church, a UK charity specialising in redistributing surplus food to vulnerable people. The RAF funding enabled the charity to expand chilled and frozen storage capacity, scale up transport and collection, and address re-labelling requirements. The project increased the volume of food redistributed and served as a model for building infrastructure in a localised food relief system. Other case studies of how the RAF has supported food donation can be found here. Based on the impact and success of the food redistribution grants in the UK, consideration can be given to a similar grant scheme in Australia. Some governments overseas have gone further in promoting food waste reduction by legally requiring supermarkets to donate unsold food products (e.g., France's Food Waste Prevention Legislation), which is also something that the Australian government may want to consider, although it is recommended to accompany this type of intervention with support mechanisms for industry such as those described above.

WRAP Response to Information Request 5.2

WRAP has chosen not to comment on Information Request 5.2.

WRAP Response to Information Request 5.3

PC specific information request	WRAP response
The PC is seeking further information on regulatory barriers to projects that recover value from organic waste. Specifically, the PC is interested in further information on the following matters: • specific regulations or regulatory inconsistencies that create disincentives to invest in projects that recover the value of organic waste (and estimates of associated compliance costs, where available)	WRAP has played a leading role in identifying and addressing regulatory barriers that limit the recovery of value from organic waste globally. As a key advisor to governments, industry, and local authorities, WRAP has developed practical guidance (such as the Household Food Waste Collections Guide, Practical Guidance on Anaerobic Digestion, and Industry Surveys on Anaerobic Digestion and Composting), pilot projects (such as the Farmer-led Data Gathering Pilots),and supported evidence-based reforms (such as the Roadmap for the Organics Sector). WRAP's expertise is aligning regulatory frameworks with the environmental and economic potential of technologies such as anaerobic digestion and composting, while upholding critical objectives such a protecting public health, the environment, and local amenity. Drawing on this experience, WRAP identifies several regulation/regulatory inconsistencies and solutions for reducing regulatory barriers to investing in projects that recover the value of organic waste without compromising core safeguards, including: • Variations and complexities in waste management across different jurisdictions can create uncertainty for businesses, deterring investment in organic waste recovery projects. In the UK, WRAP worked to harmonise waste collection and treatment practices and has advocated for standardised regulations to facilitate consistent and efficient waste management practices (Organics collection and reprocessing) • Ambiguities in the classification of waste-derived products and stringent quality standards can limit the marketability of outputs from organic waste recovery, such as compost and digestate. WRAP has developed guidelines to improve the quality and market acceptance of compost and digestate, addressing regulatory concerns and promoting the use of these products in agriculture (Organics collection and reprocessing). • Regulations mandating separate collection of organic waste can impose logistical and financial burdens on businesses and local authorities. Additionally, contamination of organic waste streams with non-compostable materials, such as plastics, complicates processing and compliance. WRAP has explored, through pilot programs, effective strategies for separate food waste collection and highlighted the need for clear labelling and public education to reduce contamination (Evaluation of the WRAP separate food waste collection trials).

	• Changes/variation in waste management legislation can lead to uncertainty and increased compliance costs for businesses investing in organic waste recovery. By providing up to date information and guidance on legislative developments, WRAP assists businesses and local authorities in navigating regulatory changes and planning intervention investments accordingly (Organics collection and reprocessing). Consideration can be given to reviewing the complex Australian regulatory ecosystem for organic waste and how the lessons from other jurisdictions and countries can highlight solutions for our unique situation.
• examples of projects not proceeding because of restrictive regulations or regulatory inconsistencies	WRAP has provided technical support (target, measure, act methodology and food waste reduction roadmap (UK Food and Drink Pact: Food Waste Reduction Roadmap) to End Food Waste Australia to initiate and expand the Australian Food Pact. A reported barrier for municipalities becoming a signatory to the Food Pact or contributing to the Hospitality and Food Service Sector Action Plan, is a potential unintended reduction of income. If a municipality owns waste management facilities and generates revenue from receiving organics waste, they can have a reduced income due to a reduction in organic waste in the landfill. Due to a potential reduction in revenue, these municipalities have advised they are disincentivised to join the Australian Food Pact and participate in pilots for developing Hospitality and Food Service Sector Action Plan. This could be addressed by reviewing the income streams, including the option to provide greater financial incentives to divert organic waste from landfill.
• opportunities for reducing these barriers without compromising objectives such as protecting human health, the natural environment or local amenity (e.g. odour), including examples of best practice.	WRAP suggests the Australian Government could review waste-derived product classification and legislation/regulations around separation and management of organic waste to make it easier for stakeholders and waste management facility operators/owners to participate in organic waste reduction schemes.

Chapter 6: Textiles and clothing

WRAP Response to Information Request 6.1

PC specific information request	WRAP response
The PC is seeking the following information on protections for consumers of textiles and clothing: • the extent to which consumers of textiles and clothing products consider certification trademarks when choosing between different products and what product qualities those certifications cover (for example, ethical production, sustainable inputs, product functionality) - which certification trademarks are considered most trusted in the textiles industry and by consumers, and what makes them stand out compared to others	WRAP has strong experience in citizen-facing work and insights, demonstrating that consumers are more likely to act on information that is available to them at their convenience. To gain trust, WRAP's research (and cited references therein) shows eco-labels must provide the following for consumers: • avoid too much, too complex, too similar, and too ambiguous information (numerous studies cited in Torma et al, 2021; Ritch, 2021) • be transparent (Futtrup et al, 2021) • be consistently applied to aid recognition (Futtrup et al, 2021) • not promote solutions to a sustainability problem at the expense of other Sustainable Development Goals (SDGs) (Torma et al, 2021) • be regulated and routinely verified (Donatello et al, 2019; Wojnarowska et al, 2021; Rees et al, 2019; Majer et al, 2022) We have not carried out a full assessment of existing certification trademarks, however in our 2022 report (see chapter 5 here), WRAP has suggested more environmentally friendly improvement actions including key certifications such as the Better Cotton Initiative certification scheme widely used in Australia by the textiles industry. We found that most certification focusses on fibre production, such as organic standards and fair trade, as well as the Global Recycling Standard, and all certifications of a product requires traceability.
• the extent to which textiles and clothing manufacturers and retailers engage in misleading behaviours (for example, misleading logos, terminology, or accreditation; providing insufficient information to support claims) that fall outside of existing general consumer protection laws (such as the Unfair Trading Practices prohibition) and associated compliance activities (guidelines)	WRAP is not aware of evidence that robustly quantifies the extent to which textiles and clothing manufacturers engage in misleading behaviours. We note that 'greenhushing' is another type of misleading behaviour which can have negative consequences. • Green claims that can be categorised as greenwashing or greenhushing can mislead consumers when they make purchasing decisions. For consumers, when trust is eroded and decision-making is more difficult; they may be confused and become less likely to choose green options when shopping due to the lack of reliable, clear, information. A further consequence of this is that the sustainability actions taken by brands that are backed by evidence are undermined. • Organisations in the textiles industry may engage in 'greenhushing', where organisations underplay or hide their sustainability efforts, to avoid greenwashing accusations and the reputational risks that follow. This lack

- what, if any, harms to consumers arise from these misleading claims	of transparency has the potential to prevent citizens from making informed decisions, and disincentivise action by both brands and consumers alike (WRAP have internal academic research experience in this space). In our experience with textiles voluntary agreements, collective reporting of progress through an independent peer reviewed organisation can provide a reduced-risk method for businesses to report on their environmental and sustainability goals. WRAP is a research partner in the UKRI funded 'Back to Baselines Network Plus' project to establish comprehensive, scientifically validated and well evidenced environmental and design baselines, standards and principles for the fashion and Textile industry. This includes emerging eco-credential standards research regarding the intervention for adoption of standards before adoption causes business harm. Collection of data on environmental impacts associated with use of certified fibres and actions to transition to the circular economy can be used to support decision making both by businesses looking to design for sustainability, and informed consumers looking to buy items with a lower impact.
• actions that governments or product stewardship schemes could take to promote the availability of reliable and relevant information about whether clothing and textiles products' claims related to circularity and sustainability are accurate and credible.	Aside from progressing to a mandatory EPR scheme, WRAP recommends the following actions can be undertaken/supported by the Australian government or product stewardship schemes to promote availability of reliable and relevant information, namely: • Availability of data: **Collect data consistently** and provide public report(s) of the **analysis of the data conducted by an independent body**. Ensure this is done annually for multiple years (ideally at least 5 to 10 years) and results are to be made public with transparency in technical methodologies. - For example, in Australia, Charitable Reuse Australia (in partnership with other organisations and with government) has developed reuse calculators for NSW and Tasmania at least, providing diverse audience types with the ability to estimate environmental, social and economic benefits and consequences. This could be extended nationally to provide an Australian tracker for circularity progress. There are many other circularity calculators (e.g., recycling, return & earn calculators, etc.) for which we recommend shared learnings and consistent development of tools – the Australian state/federal governments could facilitate this. - In the UK, WRAP's scenario modelling and its proprietary footprint tool, developed for the UK Textiles Pact (Textiles 2030), were used initially to help the Seamless stewardship scheme to collect and calculate carbon and water footprints of the products sold by businesses joining the scheme. This type of tool could similarly be expanded to capture long term trends and components of value chain emissions. The outputs of these examples provide a consolidated approach to reporting environmental impacts of textiles that based on granular product data, combined with figures for reductions associated with taking specific improvement actions that are reported publicly annually. We suggest Australia considers data

	collected across textiles schemes globally, and this information can be accessed through relevant scheme contacts or the wider Textiles Action Network. • Reliability of data: Develop a **standardised framework** for data collection that aligns to e.g., nationally determined textiles emission and water reduction targets and is based on industry standards for quality systems and services (e.g., ISO 9001). - Publicly reported reductions need to meet essential evidence standards. For example, improved fibres need to be associated with an approach to evidencing impact is achieved. Products that are claimed as 'organic' or 'recycled' need an accompanying certificate. Claims should be validated and verified through independent auditors / checkers. These actions can be used to substantiate claims if they are questioned.

WRAP Response to Information Request 6.2

PC specific information request	WRAP response
The PC is seeking the following information on product labelling for textiles and clothing: • the types of information on product qualities (such as sustainable inputs, reparability, durability and recyclability) that would be usefully included on product labels for:	The types of information that are useful for product labels with textiles products is expanding as Digital Product Passports are in development. A range of technology is now available, making it possible to provide much more detailed information on sustainability attributes that benefit both consumers and businesses. These could include standards for circularity, such as durability and preloved standards. WRAP is developing a suite of circular living standards to apply to business models (preloved clothing resellers) and setting the standard for product durability. **To support consumer ability to buy circular textiles and clothing**, WRAP has pioneered work on durability over the last decade, including our Clothing Longevity Protocol and our collaboration with the Leeds Institute of Textiles and Colour (LITAC) on the Durability Research Project as part of Textiles 2030, we transformed the fashion industry's approach to product design. A shift that has empowered businesses to create clothes that last longer with retailers such as Primark, ASOS and John Lewis launching products to market having implemented WRAP's durability best practice. The Clothing Longevity Protocol has been crucial for brands like Primark and ASOS, guiding rigorous product testing from colour fading to wash endurance, improving product quality. WRAP's partnership with LITAC is advancing durability research. The LITAC Durability Research Project aims to set new industry benchmarks by 2025, extending the product range and focusing on both physical and emotional durability - the relationship we have with our items and the emotive factors that affect how much we use them. With over 850 tests completed in its first phase and more

- consumers, to support their ability to buy circular textiles and clothing products - textiles recycling and upcycling businesses, to support their ability to adopt circular opportunities	than 4,800 specimens tested, the LITAC project is delivering significant findings to improve the lifespan of clothing. The findings are also contributing to WRAP's Textiles 2030 initiative and the Circularity Roadmap. **To enable textiles recycling and upcycling businesses to adopt circular opportunities**, changes to textiles and clothing products so that they are designed with that in mind are needed, and information to consumers that helps them do the right things with the items they no longer want. • WRAP has worked with University of the Arts London and the Circular Textiles Foundation, to set standards for design for recyclability, delivered via a suite of workshops with retailers and brands and developing an approach to assessing recyclability of products based on fibre composition and the level of "disruptors" to the recycling process. • A key output from WRAP's work on design for circularity is the Design for Recyclability toolkit. Design for Recyclability Toolkit for Fashion and Textiles | WRAP - The Waste and Resources Action Programme • Consumer understanding of what can be recycled and what can be worn again is needed to divert materials to the optimal next destination, since reuse offers greater environmental benefits, and sorting items to be reused or recycled is labour-intensive. WRAP has successfully delivered the multi-partner Automatic Sorting for Circular Textiles (ACT) UK project which completed in March 2025. This work included trials with charity and recycling collectors and sorters to test different methods for collecting textiles for recycling from consumers, separately from textiles that were suitable for reuse. ACT Take Back - Automatic-Sorting for Circularity A variety of types of messaging for consumers and different containment methods were trialled.
• what would be required for businesses and retailers in Australia to access accurate and consistent information for product label details	For businesses and retailers in Australia to access accurate and consistent information, we suggest that: • The sector first agrees on the baseline data sources and requirements, and definitions for processes and properties involved in production. As a contribution in this space, WRAP has provided a set of definitions for use when referring to post-consumer textiles, however the Seamless initiative and associated Working Groups would provide an opportunity to support this agreement. • For businesses to have access to consistent information to use on product labels, Australia needs a common framework for circular design and standards covering aspects that include recyclability, durability, standards for selling secondhand clothing. We note that Australian product labelling is growing outside the textiles sector as well (e.g., for recycling) and that engaging these sectors may help to reduce efforts and accelerate consistency in labelling of textiles. • A standardised approach to quantifying environmental impacts would support Australian brands to provide data which is then more reliable and undergoes quality assurance. For businesses and retailers, capturing scope 3 emissions are essential to being able to shift to more circular business models. WRAP has developed a scope 3 footprint tool (also adapted for Australia through use in the Seamless stewardship scheme) for which we can provide further information. Please also refer to WRAP's response in the previous row on the process for developing circularity standards/labelling.
• the extent a product labelling scheme could build on existing information systems,	Information can be provided on product labels, via QR codes either printed on swing tags or direct onto products, and via RFID tags. With clothing, basic fibre composition data and washing instructions are already standard in Australia and other countries and can be further developed to support better understanding about environmental properties of products.

standards and regulations or would require new ones to be set up, and associated costs and implementation issues	It is important to note that the amount of information that can fit onto physical labels being limited, there are advantages to the use of technology to better inform consumers at, and beyond, the point of sale. Some brands are already trialling Digital Product Passports (DPPs) and many already include RFID tags in all clothing. However, most brands do not yet have DPPs. For implementation, minimum information requirements need to be confirmed, especially: • How much information about the value chain is required? • How can environmental impacts be included by brands to meet standards in reporting and avoid the use of inaccurate data? • Which impact indicators will be required? • Which sustainable attributes should / should not be included in the information provided? • Is there a call to action for consumers e.g. should the information include recyclability and repairability information? Further certainty about likely future requirements for the textiles sector will encourage further adoption. Supply chain traceability is improving with use of technology such as blockchain, but there remain gaps in this data for most brands due to the complexity of supply networks. Even where supply chains are fully mapped, accurate reporting of data is a challenge since it relies on under-resourced suppliers to report data which they are not always equipped to. Life cycle inventory datasets provide a more accurate way to fill gaps in reporting. This is particularly an issue for textiles / clothing, given that almost all of textiles are imported, meaning that Australia needs to discuss labelling considerations with other countries. WRAP therefore support a hybrid approach to sustainability reporting which includes a combination of supplier data verified through auditing carried out for brands, together with an approved dataset for default data where brands do not have accurate and verified data of their own.
• whether other forms of labelling or information (business to business, or end of system) could facilitate greater circularity across the textiles product life cycle.	The first step for the Australian government is getting retailers and brands to adopt circularity standards in the first place. Next, developing and implementing Australian regulations covering the kinds of information provided, what minimum standards should be, and how information should be presented, is likely to support consumer understanding and ability to make better choices. Please see WRAP examples of forms of labelling in textiles and other sectors that support circularity across life cycles: • Eco-labelling research: https://www.wrap.ngo/sites/default/files/2023-12/WRAP-Assessing-Consumer-Receptivity-to-an-Eco-label-for-Product-Durability-Recyclability-and-Repairability.pdf • Food and date labelling guidance experience: https://www.wrap.ngo/taking-action/food-drink/actions/date-labelling / https://www.wrap.ngo/sites/default/files/2023-09/WRAP-Courtauld-Commitment-HHFW-Category-Specific-Best-Practice-Guidance-Quick-Reference-Guide.pdf • On-pack labelling influencing citizen behaviour: https://www.wrap.ngo/sites/default/files/2021-09/WRAP-On-pack-labelling-and-recycling-behaviour_0.pdf

WRAP Response to Information Request 6.3

PC specific information request	WRAP response
The PC is seeking further information on: • the impacts of changing from a voluntary industry-led scheme to a voluntary accredited, co-regulatory or mandatory scheme, such as: - the value of potential environmental, economic and/or social benefits from greater government involvement in textiles and clothing product stewardship schemes - the size and nature of potential costs associated with this increase in government involvement	A **voluntary scheme** will be unlikely be able to fund innovation in collections, sorting and recycling of fibres at scale given the competing business interests and "sellers" being reluctant to fund post-consumer activities. The value and wider benefits of changing to a **mandatory scheme** include allowing the Australian government the opportunity to level the playing field in terms of addressing market failure or weak spots in the supply or value chain, and provision of more nuanced behaviour change. For example, Australia, like the UK, has a strong tradition of Op shops and a resale and reuse culture that needs to be protected and enhanced in the Circular Economy. We further outline aspects of voluntary versus mandatory EPR schemes here. Whilst WRAP's UK Textiles 2030 is a voluntary scheme, the UK government (Defra) in 2023 committed to "Enhance voluntary action to reduce textiles waste by continuing to fund Textiles 2030 to reduce carbon and water footprints and accelerate action on circularity" and similarly tackling food waste via WRAP's voluntary food-related schemes and campaigns, Love Food Hate Waste, Food Waste Action Week, and Food Waste Reduction Roadmap and the key tool to Target, Measure and Act on waste as well as specific working groups to promote change and inform policy. In terms of the transition of government's role in voluntary schemes, WRAP's voluntary agreement model for all sectors is founded on funding from both industry and government. In the initial years government may provide a greater share of funding to signal to industry it supports the initiative. As industry finds value in the agreement, the funding balance will shift with industry providing more, and government reducing funding levels. If industry doesn't find value, it signals to government that it is not a valuable initiative and an alternative is needed.
• reasons for businesses and retailers to join or not join the Seamless and ABSC schemes, and what additional incentives or changes would encourage greater participation	***Ultimately, the way to encourage greater participation in voluntary schemes is to make them mandatory.*** • For **voluntary** agreements such as Seamless and ABSC, the business must weigh the reputational cost of not participating - the gains and contributions from collective knowledge exchange, subsidised business insights, and other benefits have to be "attractive and affordable" given the levy fees. • The opportunity or driver for a **mandatory** system with fee setting will relate to the behaviours that need to be changed. Further, while simple fee structures might be appropriate at the start of an agreement a more complex eco-modulated fee will be needed to drive change within every applicable business from early adopters to laggards and the additional cost of non-compliance and not moving to an eco-modulated portfolio becomes the driver and measure of "affordability".

Another reason for joining/not joining may be the purpose of the schemes and their ability to shape the national policy long-term. WRAP have experience in two national textiles voluntary agreements and lead the global Textiles Action Network.

- Textiles 2030 builds on the preceding voluntary agreement, WRAP's Sustainable Clothing Action Plan (2012–2020), which exceeded its -15% carbon and water targets. The final SCAP report showed that signatory improvement actions during the agreement led to a 21% reduction in carbon and 18% reduction in water impact compared to the baseline. WRAP found that businesses who were part of the voluntary agreement outperformed their industry peers who were not part of the initiative and 'going it alone' on environmental targets. We note that Seamless does not include explicitly emission/water targets for members, so perhaps this is an area for expansion.
- In comparison, one of the reasons why a voluntary scheme has worked well for a number of years in the UK is due to government subsidising the cost of participation by contributing grant funding to the programme. This both indicates to market that they endorse the programme and the businesses taking part in it, and that they're willing to financially contribute to the benefits enjoyed by members. There is a sense in the UK that policy will eventually become mandatory (indeed, EPR is going live in the EU which is affecting many UK businesses) and this keeps engagement high. If government commitment is seen publicly to have dwindled, we will equally see a reduction in business participation.

We have summarised the reasons for businesses / retailers joining voluntary versus mandatory schemes in the table below:

Benefits of a Voluntary Scheme	**Benefits of a Mandatory scheme**
• Those signed up are truly committed and reduces chance of 'free riders' and green washing. • Less government intervention required • Industry has more autonomy over direction of work	• Levels the playing field • Increases overall pot of money available to deploy projects and have impact • Accelerate impact by mobilising all stakeholders
Downsides of a Voluntary Scheme	**Downsides of a Mandatory Scheme**
• If government changes, or their commitment falters, then there is risk of businesses likewise 'leaving' and turning their backs on the initiative • If there is a downturn in economy businesses may walk away due to cuts in funding for membership/levy fees	• Greater administrative burden on government / PRO

• businesses' and retailers' experiences of participating in textiles and clothing product stewardship schemes, including challenges faced and benefits gained *WRAP has chosen not to respond to the remaining information requests in 6.3.*	WRAP's response here is based on our Textiles 2030 UK voluntary scheme, however many insights are also from those we are involved with in Europe and Australia. • **Overall experience of participating in textiles and clothing product stewardship schemes:** We have captured feedback from our Textiles 2030 voluntary agreement, with select testimonials found here and throughout our recent annual report here. • **Challenges faced by signatories in participating in textiles schemes:** While the Textiles 2030 signatories have made important strides in reducing environmental impact, the industry faces significant challenges in achieving its ambitious emissions, water and other related goals. Signatories continue to collectively reduce their carbon and water footprints per tonne of textile products. But the overall impact of improvement actions has been offset by increased production of 10%, which highlights the need to address spiralling unsustainable levels of production. Further, despite significant potential carbon and water savings to be gained as part of collective action, verification of use in the supply chain presents challenges and it is believed is therefore unreported. • **Benefits gained by signatories in participating in textiles schemes:** From WRAP's experience, the main benefits of taking part in voluntary initiatives for brands are primarily: - **Consumer/Reputational** – the ability to show a commitment to circular fashion and improve eco-credentials of products. - **Risk Avoidance** - Taking meaningful, industry-leading action to combat against risk of greenwashing and green claims guidance such as ACCC. - **Political** - Getting ahead of, and shape, future policy with government ahead of an enforced co-regulatory scheme. - **Environmental** – Stopping clothing ending up in landfill and reduce the environmental footprint of own business and the textiles industry. - **Competitive** - Being at the forefront of the circular economy and the innovation opportunities this presents. - **Educational** – Tapping into collective projects, learnings, networking opportunities. - **Compliance/Financial** – Reducing tax bill by satisfying eco-modulation criteria. Benefits of participation in Australian textiles schemes could be enhanced through activities including expanded data collection and reporting towards collective sectoral circular economy targets, support on individual business strategic planning aligned to climate and SDG goals, and access to Government policy development workshops.

Chapter 9: Household, consumer and emerging electronics

WRAP Response to Information Request 9.1

PC specific information request	WRAP response

The PC is seeking further information on barriers to greater reuse and repair in the electronics sector and how widespread the issues are, including:
• whether there is unmet demand (including any data, if possible) for reuse and repair services, and if so, which electronic products and consumers are most affected
	Whilst we do not have the specific data for the electronics sector in Australia, we wish to provide data from our citizen insights in re-use, repair and rental on materials recently conducted in Wales (the report can be found here).
	• Receptivity to buying refurbished electronics is significantly higher than those who have purchased refurbished products, indicating unmet demand; mobile phones (27% vs 8%); desktop/laptop/tablet (23% vs 8%); large appliances (21% vs 5%) and small kitchen electricals (17% vs 3%).
	• Consumers are disposing their electronics regularly due to a high occurrence of faults – in the past 2 years:
	  • 22% of large appliances developed a fault or broke down, of which 70% were outside warranty.
	  • 19% of small kitchen electricals developed a fault or broke down, of which 78% were outside warranty; and
	  • Despite 71% being open to repairing outside warranty only 36% had undertaken repair.
	
	Further, WRAP has found that, for the electronics sector, repair as a service is gaining traction whereas refurbishment and reuse are reaching maturity, having been normalised by a range of B2C and C2C marketplaces. For example, RELondon, in collaboration with The Restart Project and the North London Waste Authority (NLWA) is set to launch the UK's first electrical repair voucher scheme in Spring 2025. The six-month trial will take place across three North London boroughs and is funded by NLWA's Community Fund. While consideration has been given to the Right to Repair in Australia, the outcomes of this UK trail could provide further evidence to support such an initiative.
	
	WRAP promotes the repair of EEE (Electrical and Electronic Equipment) and publishes guidance on the business case for repair, repair models, and reuse protocols for EEE. More information is available here and we can discuss this further with the PC upon request.

• what might be preventing the supply of these services	WRAP's research suggests the ability to deliver cost efficiently at scale may be a barrier preventing the supply of reuse and repair services. Additionally, our research found that UK consumers are willing to pay around 20% of the product value for a repair, for larger / more expensive products such as TV, mobiles and appliances, but r pair of smaller items, and those that break more frequently is not considered 'worthwhile' by consumers, in large part due to cost of repair and lack of guarantee that it will last longer.

• what governments' role might be to address any barriers to these services, including relating to: - skills and accreditation for the repair of electronic products - coordination of and information provision about access to electronic repair services, including where this may assist recipients of social benefits and services.	WRAP has worked in Wales on repair and reuse since before Welsh Government's 2018 'Beyond Recycling' strategy called for a universal culture in the nation by 2050. WRAP's work has fed into the Net Zero Skills Action Plan and considered skills development to support repair and reuse in priority products, including EEE. Most recently WRAP has produced a Routemap Towards a Universal Culture of Repair & Reuse, setting out priority actions for achieving the ambition of that culture in Wales. In our EEE work, we have found that: • Repair and reuse hubs were strongly needed to support re-use, repair and remanufacturing sectors to grow in our communities and town centres • There is a lack of industry guidelines and standards for reuse and repair • The need for more comprehensive right to repair regulations was stated as a way of promoting circular behaviour and supporting repair initiatives. Greenwashing and the need to consider whole life cycle to avoid further issues at the end of life was raised e.g., the rise in electric vehicle batteries and wind turbines. • There is a need for a communications campaign for manufacturers to promote cultural change towards reuse, repair, and remanufacturing. • Considerations for tax relief on secondary materials or reused, repaired, refurbished and remanufactured products could be considered. Government's role in Australia can span many of the points above, in particular supporting publication of priority actions and targets for Repair and Reuse, support development of repair and reuse hubs, develop industry guidelines and standards for reuse and repair, develop comprehensive right to repair regulations, support behavioural change campaigns, and review financial support mechanisms.

WRAP Response to Information Request 9.2

WRAP has chosen not to respond to these this set of questions.

WRAP Response to Information Request 9.3

WRAP has chosen not to respond to these this set of questions.

Chapter 10: System-wide arrangements

WRAP Response to Information Request 10.1

WRAP has chosen not to respond to these this set of questions.

WRAP Response to Information Request 10.2

PC specific information request	WRAP response
The PC is interested in further information on **supporting businesses and communities to identify circular opportunities and develop partnerships**: • What government initiatives could most effectively support businesses' coordination? – How could governments use or build on existing platforms for information sharing or collaboration? – Are there examples of governments partnering with intermediaries, such as industry associations or other network bodies, to support collaboration? How might this be further strengthened? – What would be the benefits and costs associated with these initiatives, in terms of	WRAP's global impact is based on our expertise in designing, developing, convening, managing and supporting collaborative change programmes, mobilising businesses, governments, local authorities and other stakeholders to reduce the end-to-end environmental impacts in key sectors of production and consumption – food, textiles and plastic packaging. We do so through voluntary agreements which are a type of government initiative that supports business coordination and action across the entire supply chain rather than just targeting one area. The success of our approach has led to us working collaboratively with organisations across the globe, to develop agreements that suit local requirements and priorities. WRAP has recently estimated the Cost Benefit Analysis of our circular economy programmes delivered between 2022 and 2024 (unpublished – available upon request) that show both financial and environmental (carbon) savings. ***How could governments use or build on existing platforms for information sharing or collaboration?*** There are numerous existing platforms across Australia that help communities identify what items can be recycled locally e.g. RecyleMate, Planet Ark's 'Recycling Near You', and individual Local Council websites. Each offers slightly different information, making it difficult for communities to understand which is the most up to date. Consideration can be given to the Government intervening and supporting a resource hub so communities can find all of the relevant recycling information in one place, to reduce confusion and increase confidence in the information. In the UK, WRAP's Recycle Now Recycling Locator (Recycling Locator | Recycle Now) provides consistency across jurisdictions (England, Wales, Northern Ireland) and the latest up-to-date information on what can be recycled and where. The long-term support of governments has been key to its success, as well as the engagement by government departments. For example, the NHS (UK public funded healthcare system) now lists the locations where communities can return wheelchairs and crutches.

economic, environmental and/or social outcomes? – What lessons could be learned from successful government initiatives supporting facilitation or coordination in other industries?	***Examples of governments partnering with intermediaries, such as industry associations or other network bodies, to support and further strengthen collaboration*** WRAP's example below for the Welsh government shows how long-term investment in a circular and sustainable future can have major economic, environmental and social outcomes. **PROBLEM** In the early 2000s Wales had recycling rates as low as 5%, among the lowest in the European Union. The Welsh Government recognised the need for a long-term strategic approach to change and funded WRAP to support them in an ambitious, multiyear, transformational programme. **SOLUTION** WRAP has worked with the Welsh Government to design and deliver the whole-of- system change including: • **Developing essential recycling infrastructure:** In 2011 WRAP supported the Welsh Government to develop essential recycling infrastructure in the form of a Collections Blueprint, collaborating with both the devolved government and local authorities. The financial, environmental and social implications of existing recycling collection systems informed the creation of a new model that enhanced recycling rates and met sustainability goals while delivering cost savings for local authorities. • **Driving ambitious targets:** WRAP's research was used to set legally binding targets to put Wales on the path to an ambitious recycling rate of 70%. Leveraging our trusted network of connections with researchers and businesses, we worked with the government to achieve this target and bolster their recycling collections, piloting and scaling new collection approaches. We also ran multiple information and behaviour change campaigns, and created digital tools to help people recycle at home and in the workplace. • **Grant funding:** Over £10 million in funding and grants has been supplied to businesses working in the circular economy. • **Targeted Intervention - Public Sector Sustainable Procurement Support:** Since 2016, WRAP has partnered with Welsh Government to offer a suite of public sector sustainable procurement services, including training for public sector supply chain businesses. The benefit of this long-term approach is that since 2016, WRAP has worked with more than 50 public sector organizations, influencing more than £1bn of procurement influenced out of a total £8bn public sector spend. In 2023/24 alone more than £2.4bn influenced was influenced. An external evaluation of WRAP's public sector sustainable procurement work showed a cost benefit analysis of 1:£12.49 return for every £1 invested by government • **Targeted Intervention – Market Development & Supply Chain Trails:** Welsh Government partnered with WRAP to develop the Welsh market for recyclate materials: Market development | WRAP. WRAP's materials marketing service helps local councils to find the right business to take their materials, negotiate the best price, and keep the materials in the UK/reduce exports.

- **The Supply Chain Trials programme** accelerates the circular economy by connecting suppliers and receivers of recyclate material. The aim of the trails is to increase the production of products or components that are remanufactured, refurbished or made from Welsh recycled materials, and to keep products and materials in use for as long as possible. The impact of the trials includes up to 100% increase in the use of recycled materials in products, which led to a 50% reduction in carbon emissions for some businesses, while delivering a return on investment of £2.49 for every £1 spent.

  The programme has also delivered global impact in a previous trial with Vernacare which developed sharps containers made from up to 100% recycled content that are now used by the NHS and healthcare facilities around the globe.

  One trial helped Tarmac to increase their use of recycled content to 90% by helping them to test alternative, post-consumer recyclate. This resulted in substantial costs savings of 8-10% and carbon savings of 36% per tonne of plastic used.

  Another trial demonstrated that virgin materials could be successfully replaced with 100% recycled materials. An additional impact was that following the excellent performance of the recycled material, Advantage Automotive extended the use of the material to their other product ranges.

OUTCOME AND LESSON LEARNED

- The Welsh Government, supported by WRAP's expertise and multi-stakeholder approach proved a powerful combination: Wales is now a leader in the circular economy and has the second highest recycling rate in the world:

  "It's fantastic news that Wales has climbed to second in the world for recycling. This shows what we can achieve when people across Wales work together to deliver against ambitious targets, backed up by investment in our infrastructure. We have transformed from a nation with very low rates of recycling at the beginning of devolution to one of the leading nations in the world and far ahead of the rest of the UK." - Vaughan Gething, First minister of Wales" Da iawn Cymru! Wales named as second best recycling nation in the world | GOV.WALES.

- Hundreds of thousands of tonnes of waste and carbon emissions have been avoided while hundreds of new sustainable jobs have been created. WRAP continues to support the Welsh Government in their ambitious plans to achieve a zero-waste, net-zero economy, with our next steps focused on helping them deliver a universal culture of reuse and repair.

Welsh Government has spent a total of £1bn investment since Devolution which has seen the household recycling rates increase *(UK statistics on waste - GOV.UK*. In comparison, England and Northern Ireland have not taken the same robust, long-term committed approach as and their rates are not as high as in Wales. Consideration can be given to taking a similar, long-term, whole-of-system approach to meeting Australian and international climate targets.

The PC is interested in further information on **navigating regulatory complexity**: • What are the barriers to knowledge (or transition) brokers, project officers, community development officers and the like effectively assisting organisations to navigate regulatory complexity?	In WRAP's long, global experience, a key barrier is the lack of, or changing, funding for multi-year programmes. Change cannot always be delivered in a financial year, often requiring programmes and initiatives to work over consecutive years. For regulatory changes, businesses need support in the lead-up to regulations taking effect to prepare for implementation; support during the initial implementation period to ensure compliance; and support when regulations change or are revised. WRAP has extensive experience supporting Government to plan the multi-year support businesses need, as well as delivering the support on behalf of Government, for example here: WRAP Statement on Simpler Recycling | WRAP
• To what extent is there a need for government to provide services, given that there are already private consultant services that can support businesses to navigate regulations? *WRAP has chosen not to respond to the remaining information requests in 10.2.*	WRAP recommends that the Australian government and other organisations (consultants, NFPs, etc.) work together in service offerings to accelerate circularity. Below, we provide a recent example below of how collaboration between government and WRAP enabled the wider community to be better prepared for incoming workplace recycling laws. • **Policy setting:** In April 2024 a new law came into effect in Wales which requires all workplaces such as businesses, public sector and charities need to separate their recyclable materials in the same way most households already do. It applies to all waste and recycling collectors and processors who manage household-like waste from workplaces. Government was best placed to support businesses navigate the new regulations as private consultants may have mis-interpreted the regulations. • **Preparing businesses for incoming policies:** In the preceding year in preparation for the law coming into effect, the Welsh Government partnered with WRAP to provide support services to help businesses understand the new requirements, what needed to be implemented, how to engage with employees and customers, and how to negotiate new services with their waste providers. WRAP developed sector guides, downloadable communication resources, for example bin signs and posters to use in the workplace; a one-stop website, and held webinars: The Business of Recycling Wales Guidance for all workplaces. This ensured businesses had sufficient time to prepare for the implementation of the new regulations. WRAP also worked with the waste management sector to develop businesses cases for additional investment, marketing plans etc. These businesses also applied for Welsh Government grant funding (administered by WRAP). This helped to de-risk the capital investment. • **Scaling up to other countries in the UK:** This collaboration was so successful that WRAP was engaged to replicate the support for England (Business of Recycling | WRAP) and Northern Ireland(Business of Recycling - Northern Ireland).

WRAP Response to Information Request 10.3

PC specific information request	WRAP response
The PC is interested in further information on **challenge-based funding for innovation**: • Are there examples of circular economy innovations that have been successfully funded through challenges (in Australia or internationally) and what determined their success? • What might be the benefits and limitations to this approach? What are the likely costs? The PC is interested in further information on **connecting industry and research**: • What are useful models for how government can connect industry and researchers? When is this best done at the industry level, and when by location (such as a region or local government area)? • Are there examples of successfully adopting or diffusing circular innovations across supply chains? •	Below we provide two international examples of circular economy innovations/programs successfully funded for which WRAP have handled the applications. Each example has expected/gained impact and case studies that is associated with benefits. Any costs mentioned relate to the amount of funding provided for programs and exclude overhead/administrative/other costs. These examples across value chains provide insights into successful models for the Australian government to consider. **Example 1 (Wales): Circular Economy Fund** In 2019-2022, on behalf of Welsh Government, WRAP Cymru administered a £6.5million Circular Economy Fund which aimed to: • increase the use of recycled plastic, paper / card or textiles in existing or new products; or • extend the lifetime of products / materials through preparation for re-use, refurbishment or re-manufacturing activities, with a particular focus on furniture (soft and hard), electrical equipment, and clothing, textiles, and shoes. Manufacturing products containing recycled content and extending the useful lifetime of products is central to the achievement of a circular economy. The Circular Economy Fund has helped to accelerate Wales' shift towards this, whilst facilitating business growth and the creation of new jobs. Its purpose is to enable capital investment in keeping resources in use for as long as possible, instead of being incinerated or going to landfill, and to drive demand for secondary materials. Two case studies associated with this funding are as follows: • **JC Moulding** incorporated more recycled content into their range of bespoke products, increase manufacturing capacity and tap into additional revenue streams. Over the next three years the funds received were expected to lead to creation of 6 new jobs, £168,000 cost savings, a substantial increase in revenue for the business, the use of 756 tonnes recycled PP and ABS plastics, and 503 tonnes of CO2 savings. • The **Cardiff Cycle Workshop** case study shows how a well-targeted grant can help an organisation build on circular economy principles. Increasing workspace capacity and storage facilities boosted the business' effectiveness and reach, which significantly increased the number of refurbished and re-used bicycles that would otherwise have been sent to be scrapped. The grant from the Welsh Government through WRAP Cymru's Circular Economy Fund resulted in a 10-tonne increase in refurbished bicycles, 600 extra bikes available for use, and the creation of one new permanent full-time job. **Example 2 (UK-wide): Resource Action Fund**

	The Resource Action Fund (RAF) was an £18 million fund, provided by UK Department of Environment, Food & Rural Affairs (Defra) to support resource efficiency projects, with the goal of diverting, reducing, and better managing waste. The Fund supported organisations in England which aimed to reduce waste and make better use of materials. It also delivered key policy outcomes in the areas of food, plastics, textiles, recycling infrastructure and litter. RAF delivered both expert support in the areas of food and non-household municipal recycling and grant funding. Example impacts include: • **Policy interventions for adopting CE:** RAF projects will contribute to the achievement of Defra's strategic objectives, as set out in the Government's Resources & Waste Strategy (2018), to maximise resource usage and minimise waste. Over their lifetime, the impact of these interventions will continue to grow. The 296 organisations that have received support through RAF are expected to divert over 180,871 tonnes of waste. This is estimated to avoid over 395,228 tonnes of CO_2e emissions. • **Food loss and waste across supply chains:** Food redistribution grants provided investment to increase the collection of surplus food from retailers and manufacturers and its redistribution to those in need. Over £3.2 million was awarded through RAF for necessary equipment and infrastructure such as storage, vehicles, and equipment, and costs such as training and new roles required for the delivery of these projects. These grants provided essential support to not-for-profit organisations which enabled them to redirect at least 30,323 tonnes of surplus food across England and preventing it from going to waste. • **Textiles downstream impacts:** The RAF Textile grants (WRAP-Resource-Action-Fund-Textiles-Grants_0.pdf) supported projects enabling textile waste materials to be recycled or re-used, diverting this from landfill or incineration, so that it remains a valuable resource. Focus was given to clothing and linen textiles and projects demonstrating a level of innovation beyond normal industry practice. £800,000 was awarded to projects for eligible capital expenditure such as equipment costs and technologies enabling the recycling and/or re-use of textile waste materials, sourced from either post-consumer textiles from municipal sources or pre-consumer (or post-industrial) textiles for recycling projects. Impacts included 13,970 tonnes of waste diverted from landfill, 20,068 CO 2 emissions avoided, automated fibre sorting of textiles, increased value of waste textiles into products capable of being marketed for their environmental benefits and setting examples of what can be achieved within the recycled textiles sector, and shared learnings from a trial process.

WRAP has chosen not to respond to the remaining information requests in 10.3.

WRAP Response to Information Request 10.4

PC specific information request	WRAP response
The PC is interested in further information on the following questions: • Will the proposed Australian sustainable finance taxonomy and enhanced ESG reporting provide sufficient information for investors to make informed decisions about circular economy projects? Or are further initiatives, required to improve investor confidence in the circular economy?	*WRAP has chosen not to respond to this question directly but provide insights in our responses in 10.6.*
• What are examples of sectors or circular activities being impacted by the cost and availability of insurance? What factors or risks currently determine insurance availability (or lack thereof)?	WRAP have provided a non-exhaustive list in response to this question as follows. • **The sectors being impacted by the cost and availability of insurance include:** • **Tourism:** Rising insurance costs affect businesses, particularly smaller ones, impacting their competitiveness and viability. • **Real Estate:** Influencing property owners' adoption of sustainable practices, with favourable terms offered for circular economy integration. • **Sharing Economy:** Insurance costs can impact platforms like car-sharing services, which require specialized products. • **The factors determining insurance availability or lack thereof include:** • **Climate Change:** Increased natural disasters affect insurance costs and availability, particularly in high-risk areas • **Regulatory changes:** Compliance demands can complicate insurance offerings and availability. • **Cybersecurity Risks:** Threats to data security impact insurance companies' ability to protect client information. • **Economic Fluctuations:** Inflation, interest rates and geopolitical instability can influence pricing and availability • **Technological Advancements:** AI and digital transformation can improve efficiency but also pose challenges if not well-managed.

WRAP Response to Information Request 10.5

WRAP have chosen not to respond to this set of questions.

WRAP Response to Information Request 10.6

PC specific information request	WRAP response
The PC is interested in further information on the following questions: • What are specific examples of how governments (at all levels) and businesses would use the proposed circular economy indicators to identify and track progress of circular opportunities? • What would be the costs associated with gathering data on the proposed circular economy indicators? • Which agencies would collect or estimate the data?	WRAP has over 20 years' experience in collecting and analysing robust key indicator data, for use by government at all levels, and businesses (of all sizes) to identify and track progress of circular opportunities. Through our global voluntary agreements, signatories are required to submit annual data returns on their progress against agreed targets. The data provided includes the amount of waste generated and GHG emissions. The collated progress reports are then shared with signatories and government to discuss and agree 1) what interventions and levers can government pull to support business progress towards circularity and 2) what are the barriers, challenges and opportunities facing businesses in achieving circularity. Below we provide some examples from the Northern Ireland and UK government that can be adapted in Australia. **Example 1 (Northern Ireland): Waste** • **Overview:** WRAP is providing national arisings and composition studies for the Department of Agriculture, Environment and Rural Affairs (DAERA) in Northern Ireland, covering household waste (composition), Construction, Demolition and Excavation waste (composition and treatment/disposal) and Commercial and Industrial waste (arisings, composition, treatment and disposal). Combined with government data, the findings of this work will include material composition and recovery rates and will allow a GHG footprint to be calculated for waste management of these streams. It will also form part of the government's wider programme to update all of the national climate data sets in preparation for greater measurement of progress against national circularity targets. • **Indicators:** When planning for a circular economy it is important to understand the materiality of waste streams, treating them as specific material flows rather than simply tonnages of waste (material flow analysis) or abstract impact categories (LCA – Life-cycle Analysis). Material flow research has been undertaken in Australia and could be added as a known method to enhance understanding of the proposed indicators.

Example 2 (UK): UK Food and Drink Pact

- **Overview:** Over the past 20 years through voluntary agreements such as the UK Food and Drink Pact. This agreement is connected to similar ones globally through The Food Pact Network, including the Australian Food Pact. In the UK since 2018, organisations across the supply chain have had the opportunity to submit data in a simple and comprehensive spreadsheet template via the Food Waste Reduction Roadmap. Today, over 400 organisations have committed to following it, from major retailers and manufacturers to hospitality and trade associations – and they're saving money by slashing food waste. Retailers signed up to the Roadmap, accounting for 97% of the market, prevented 19,000 tonnes of food from going to waste in 2022, the equivalent of £62 million worth of food saved. These statistics then support UK's progress towards its food waste targets.
- **Indicators:** In partnership with governments and businesses, WRAP has facilitated the collection and analysis of major indicators, such as waste generated, water usage and greenhouse gas emissions (and many other indicators) to identify, track and drive circular changes. There is a strong focus on value chain scope 3 greenhouse gas emissions. WRAP has developed a Scope 3 GHG measuring and reporting protocol for food and drink businesses for tracking this emissions indicator. We strongly recommend capturing scope 3 emissions from businesses is a priority for identifying circular economy opportunities in Australia per sector.
- **Costs** are primarily incurred by organisations collecting data and the data analysis and administrative teams; however, the data template is designed to collect information applicable to multiple related initiatives.
- **Outcome:** The data from all the signatories is analysed and compiled into a report outlining progress against the agreed targets. These are discussed with both business and government signatories. Businesses use the report to take targeted action to reduce waste in their own operations, supply chain and from consumers, while governments can use the data to examine the UK's progress towards achieving SDG 12.3

Example 3 (UK and 27 EU countries): Employment and the Circular Economy

- **Overview:** Following COP26 in Glasgow in November 2021, WRAP published the report Delivering climate ambition through a more circular economy which identifies the potential for a more circular economy to create net increases in employment in the UK and the EU countries, whilst also reducing greenhouse gas emissions and demand for raw materials. Outputs were discussed with the UK government at the time the report was released, to be used when aligning priorities arise.
- **Indicators** included gross value added, gross jobs created, net jobs created, materials avoided, materials diverted, and net reduction in GHG emissions.

WRAP would be happy to discuss with the PC the costs and specific collection details regarding the above examples.

Additional note: Circular Economy indicators that align with wider sustainability compliance

	To reduce duplication of effort and the unnecessary need for additional training, WRAP strongly suggests that, where possible, the Productivity Commission aligns any metrics related to advancing Australia's circular economy to those found in mandatory/voluntary climate, sustainability and nature standards and frameworks, including the AASB (ISSB IFRS) and TNFD. These include greenhouse emissions, pollution, water usage, and other core metrics, but also sector related metrics such as those posed by the ISSB here. ***These indicators support transition and resilience planning that are tightly linked to circular economy opportunities.*** The indicators in mandatory standards such as AASB S2 have key benefits including: • Stronger buy-in from executive/Board levels whose businesses are already / soon to be reporting on these metrics publicly • Reducing duplication of efforts • Easier comparison with dozens of other nations implementing the same standards • Easier benchmarking of metrics across value chains globally • Reduced cost in creating new indicators as the standards provide supporting guidance on these indicators, including from the GHG Protocol.
• How consistent across states and territories is the data needed for circular economy indicators? Does it allow comparison across industries or sectors?	In WRAP's experience, **consistency in data collection across states/jurisdictions and alignment with compliance standards/frameworks is essential for the long-term ability to drive circularity changes across the value chain.** At present, different states and territories collect different data, emphasising a need for a national standard and framework on data collection for circular economy indicators. The other consistency required is that for systemic change – being able to link indicators and data collected across sectors to intervene across value chains. WRAP governs, leads, and/or accelerates national and global voluntary agreements in food, textiles and plastics to drive systems change. Greenhouse emissions is the common indicator across these agreements, with water usage being a key indicator across at least food and textiles efforts. WRAP would be happy to provide more details on all indicators captured across our voluntary agreements that include participation from hundreds of major brands/organisations.
• Are there alternative indicators that would better measure the progress of Australia's circular economy? What would be the benefits and costs associated with these alternatives?	WRAP recommends the following indicators be considered by the Productivity Commission to support Australia's circular economy, based on our strong experience in collecting best practice data for these indicators in other countries. These could be alternative and/or supporting indicators. **Benefits of including circular economy indicators for resource loops** • INDICATORS FOR NARROWING OF RESOURCE LOOPS: **Material resource efficiency (GDP per tonne of material passing through the economy).** This metric helps measure narrowing of resource loops (i.e. dematerialisation and

decoupling). WRAP has in the past supported the UK government (DEFRA) in planning around measurements of material resource efficiency.

- INDICATORS FOR SLOWING OF RESOURCE LOOPS: **Proportion of products on the market that are part of a circular business model aimed at slowing resource loops** (i.e. product as a service, design for durability, remanufactured or part of a take-back and remanufacture system). This metric could be quantified by tonnes of material flow or economic value and could also include reuse. As an example, WRAP's Textiles Pact collects data on the volumes of products placed on the market each year, and the proportion of total sales by weight that are sold via circular business models. Reporting is carried out on an annual basis and tracks performance against targets to reduce water and carbon footprints.
- INDICATORS FOR CLOSING RESOURCE LOOPS: For measurement of closing resource loops there are a range of metrics such as the **Circular Material Use Rate (CMUR)** model used by Eurostat. This metric is derived by dividing the tonnage of recovered materials entering the economy each year by the total material input. Rather than measure the recovery of materials at end of product lief, it measures the extent to which the economy makes use of these recovered materials. As an example, WRAP's Textiles Pact collects data on volumes of products placed on the market each year, by fibre composition. Brands and retailers are also asked to report the proportion of these fibres that are recycled content, by fibre type and for different recycling technologies.

Benefits for including circular economy indicators for behaviour change

WRAP has extensive experience in capturing behaviour changes towards many aspects of tracking circular economy progress. The indicators described below help government to track recycling and food waste and inform where to focus future funding and interventions and how to target relevant behaviour change messaging.

The collection of these additional metrics is only successful due to long-term consistent resourcing and funding, and data analysis and reporting of outputs to inform future directions. Australia would strongly benefit from investing in tracking surveys, and we provide two successful and long-running examples below that could be adapted in Australia.

Example 1: RECYCLING ANNUAL TRACKER SURVEY

- Each year WRAP conducts a recycling tracker survey of over 4,000 UK households that gathers evidence on recycling attitudes, knowledge, and behaviour. Commencing in 2004, it is the largest and longest running of its kind and evidences the impact of the Recycle Now campaign and Recycle Week.
- Example indicators: Recycling frequency, missed capture rates, 'wishcycling' (i.e., when citizens unknowingly recycle incorrectly), confidence in recycling, uptake of recycling education and awareness, impact and uptake of campaign messaging, and accessibility to recycling services/donation points.
- The outcomes of the 2024 WRAP tracker survey, including indicators measured, can be found here.

	Example 2: CONSUMER FOOD WASTE PREVENTION TRACKER SURVEY • Indicators collected: The bi-annual UK-wide Consumer Food Waste Prevention Tracker survey of UK households gathers evidence and data on food waste attitudes, knowledge, and behaviour. • Commencing in 2007, it is the largest and longest running of its kind which shows changes in UK citizen behaviour and the impact of behaviour change activity, including the impact of Food Waste Action Week. For example, the UK Household Food Waste Tracking Survey 2022 highlighted that recognition of Love Food Hate Waste remained historically high at one in three citizens, and in November 2022, six in ten citizens recalled seeing information about the amount of food wasted; and close to four in ten recalled information about how to plan, buy, store or prepare food to reduce waste. • Benefits: The profile of the sample will match the known profile of the UK population, with survey quotas set on age within gender, region, social economic grade, and ethnicity. The data can provide the statistically significant specific, detailed data needed to better inform policy making and decisions about HHFW, as well as inform citizen behaviour change interventions and campaigns.
• What reporting format would be most valuable and accessible to stakeholders using the monitoring data (e.g. including in the Measuring What Matters framework, or a separate dedicated dashboard)?	WRAP supports leveraging and expanding existing data capture frameworks where possible for key indicators, such as via Measuring What Matters. We continue to recommend simple data upload formats (e.g., spreadsheet template, easy to use data portals/dashboards) that align with ISO standards as applicable and have quality assurance and cyber/compliance risks considered for data sharing. Further, for the data collector to assess what data is already being collected in other related initiatives to avoid duplication.
• Over what timeframe could the proposed expanded set of indicators be rolled out? How frequently should the set of indicators be reviewed and updated, so that they can remain fit for purpose to inform government and business decisions about the circular economy?	WRAP recommends annual collection of major circular economy indicators described in our responses above. Rolling out the proposed indicators should be done in 2025 given the rapid progression of EPR, circular business models, sustainability reporting, and other circularity related initiatives and because there are existing methodologies and guidance froth ese proposed indicators. It is important to recognise the time taken to complete (by stakeholders), manage, perform quality assurance, collect, analyse, document, and perform other administrative tasks before the outputs can influence policy and wider decision-making and ensure the following year still aligns with any national targets and related compliance. We recommend a review every two to three years for updating indicators.