Submission to Productivity Commission – 'Opportunities in the circular economy'

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Introduction:

The Future of the World is in our Hands.

Let's face it, the world is suffering various challenges. How can WE fix things?

A graph of global population growth shows a 'hockey stick' curve (World Economic Forum, 2024). From an estimated population of 190 million at the birth of Christ, 600 million in 1700, 1.65 billion in 1900, then close to 6 million in 2000, and now another 2 billion in the past 20 years – the world has grown sevenfold in the recent 200 years. Human population on planet Earth is currently 8. 2billion (Worldometer, n.d.) and predicted to reach 10.3 billion in 60 years (United Nations, 2024).

Under-developed countries strive to become developing countries, and developing countries strive to become developed countries. A characteristic of developed countries is consumerism – which requires more and more production. Is this sustainable?

Our presence on Earth has resulted in resource depletion, solid waste resulting in a shortage of landfill sites, water pollution, air pollution and land degradation. Our modern way of living is based on a 'linear' economy whereby we use virgin materials to make things, use the things, and then throw out the things. Put simply, we are trashing the Earth.

We need to move to a 'circular economy' which involves eliminating waste by keeping products and materials in circulation as long as possible (e.g. maintain, repair, re-use, recycle), coupled with eliminating waste and pollution and regenerating nature (Ellen Mac Arthur Foundation, n.d.).

But, moving to a circular economy is NOT EASY! A paper I wrote (Chad, 2023) highlighted the need for all layers of society to become involved in behaviour change – the three levels of government, industry and the general public - for our very future, and that of our kids. However, change is costly, and impacts the population (e.g. potential job losses). A challenge is that we typically have political elections every three or four years, so we generally operate with short-term perspectives rather than focussing on the long-term. Various levels of government have implemented circular economy policies which is great, but unfortunately there appears to be no real rush for progression. This is problematic given we have problems now! There is also a suggestion of 'pass the buck' - whilst China is responsible for the largest greenhouse gas (GHG) emissions at 30% (European Commission, 2024), they also have 32% of global manufacturing (World Population Review, 2024). Hence China is in part generating GHG on behalf of countries who have products manufactured offshore in China.

To satisfy a growing population, we need more jobs - which is based on increasing demand for goods. Indeed, our superannuation funds are based on businesses being successful and growing. Various politicians are regularly shown wanting to generate a growing economy. How can businesses continue to grow and employ people – and ideally introduce a circular economy in which people use less item? Something needs to give!

So, what should we do?

We need a big behavioural change to become more sustainable, but we don't want it to cost us money. We want to reduce use of fossil fuels, but not if it results in job losses. We want to be more environmentally friendly, but not if it costs us more.

This is the big challenge for society, are we, as a society, up to the challenge?

Here's hoping ALL levels of society work together to progress towards a 'circular economy'.

Response to Information Request

Information request 1

Circular economy success stories and measures of success

- Australia's overall potential to move to a more circular economy, as well as how best to monitor progress and measure success.

Response

Research examining how households dispose of households goods (Staines et al., 2020a, Staines et al., 2020b) shows the challenges that need to be addressed. Shortage of landfill sites is a major issue. Various Local Government Councils are taking steps to introduce increased recycling and disposal infra-structure to prolong existing landfill sites. Key issues include contamination of the 'recycling' stream. Households require increased education regarding which items can or cannot be recycled. Households require increased knowledge of how and where to dispose of unwanted items in a circular manner. Councils directly, or with assistance of other organisations need to offer increased facilities for repair and re-use of unwanted items.

Information request 2

Priority opportunities to progress the circular economy

- Opportunities in Australia to improve environmental and economic outcomes through greater adoption of circular economy activities.

Response

Narrowing loops - reducing the demand for materials – as a developed country, we tend to live in a consumerist society. Social marketing can be utilised to reduce the community perception that consumerism is required – this does however have implications for businesses wanting to employ people etc. Government needs to drive this social marketing. Additionally, businesses need to develop and offer more environmentally friendly products, and, convince consumers to purchase such items instead of numerous existing less environmentally friendly products.

Slowing loops – repair items. This involves 'design for environment' whereby items can be cheaply and easily repaired, to replace the throwaway culture where it is cheaper to discard items and purchase new items.

Information request 3

Hurdles and barriers to a circular economy

- The main reasons businesses and consumers have not adopted circular economy practices to date, including

Response

My research paper (Chad, 2023) analysed key issues impacting on adoption of a circular economy by households in relation to unwanted household goods. Utilising the COM-B Model of Behaviour and the associated Behaviour Change Wheel (BCW) developed by Michie et al. (2011) the research examined capability, opportunity and motivation factors leading to behaviour. All the factors mentioned in the Productivity Commission current 'Call for submissions' were evident. It is often cheaper to discard an item than have it repaired. People have differing attitudes and knowledge regarding circularity. Government regulations impact their current behaviour. Lack of information and/or resources impacts people's behaviour. Additionally, lack of coordination impacts behaviour of households. The Behaviour Change Wheel includes 'sources of behaviour', 'intervention functions' and also 'policy categories'. This Model is highly recommended as a methodical process to analyse the current circularity situation and can be used to assisting develop future strategy. A strength of the model is that is systematically addresses the various options and identifies appropriate stakeholders.

Information request 4

Governments' role in the circular economy

Response

As indicated immediately above, the Behaviour Change Wheel is a useful model.

Government can assist to progress behavioural change via incentives/penalties, provision of information, regulatory changes, education/training, facilitation collaboration and infrastructural planning and development. This is not 'new' – it simply needs to be done.

References

Chad, P. (2023). Rescuing Unwanted Household Goods: Moving Towards a Circular Economy. *Australasian Marketing Journal*, *31*(4), 279-293. https://doi.org/10.1177/14413582231165268

Ellen Macarthur Foundation. (n.d.). Circular economy introduction. https://www.ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview

European Commission. (2024). GHG emissions of all world countries. https://edgar.jrc.ec.europa.eu/report_2024

Michie, S., van Stralen, M.M., & West, R (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions.

Implementation Science **6**, 42. https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-6-42

Stanes, E., Wright, S., Chad, P. and Ng, J. (2020a) Benchmarking, characterising and valuing the resources in household bulky waste clean-up services. University of Wollongong. https://documents.uow.edu.au/content/groups/public/@web/@gc/documents/doc/uow268897.pdf

Stanes, E., Wright, S., Chad, P. and Ng, J. (2020b) Benchmarking, characterising and valuing the resources in household bulky waste clean-up services: Summary report and ISJO Recommendations. Prepared for the Illawarra and Shoalhaven Joint Organisation by researchers of the University of Wollongong and incorporating ISJO Recommendations. https://isjo.nsw.gov.au/wp-content/uploads/2022/11/Benchmarking-kerbside-cleanup-Summary-and-recommendations-report_Feb-2021.pdf

United Nations. (2024). Growing or shrinking? What the latest trends tell us about the world's population. https://news.un.org/en/story/2024/07/1151971

World Economic Forum (2024). Population Boom: Charting how we got to nearly 8 billion people. https://www.weforum.org/agenda/2021/12/world-population-history/

World Population Review (2024). Manufacturing by Country. https://worldpopulationreview.com/country-rankings/manufacturing-by-country

Worldometer (n.d.). Current World Population. https://www.worldometers.info/world-population/