SOUTH AUSTRALIA'S SINGLE USE PLASTICS AND CONTAINER DEPOSIT SCHEME – RESPONSE

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The following paper from the Australian Council of Recycling (ACOR) and Reloop Pacific[*] (https://reloopplatform.eu/) outlines positions associated with the primary topics discussed - managing single use plastics and reform of South Australia's container deposit scheme (CDS). We would welcome the opportunity to contribute and would be pleased to provide further input to the government's policy deliberations as these issues progress.

INTRODUCTION

It is certainly the case, as Minister Speirs suggests in opening this discussion paper, South Australia has *'… a history of leading the nation in waste management.'*

With an impressive 83.4%[†] waste diversion from landfill this is no overstatement. This current SA discussion paper regarding single use plastics (SUP's) and reform of the states container deposit scheme (CDS) is another example of this progressive approach.

The proposition that SA may again lead additional states and the nation in better managing SUP's and improving CDS is welcome and we look forward to assisting to make this happen. Reloop and ACOR members bring considerable expertise, resources and policy innovation to these processes.

SINGLE USE PLASTICS

The European Union is globally leading the issue of in SUP management, so their recent actions are instructive in helping pave the way for additional jurisdictions such as SA.

As has been well reported, in December 2018 the EU parliament passed a new Single Use Plastics (SUP) Directive (http://www.europarl.europa.eu/news/en/press-room/20181219IPR22301/parliament-and-council-agree-drastic-cuts-to-plastic-pollution-of-environment)

This ground-breaking initiative will now manifest (in different ways) across EU member states within the next two years. The following (from the Reloop Platform EU offices) outlines a summary of this directive and its multiple objectives and targets. Some additional commentary on SA's mirroring this work is also contained.

The following lists various products and the approaches taken by the EU in their management. It's worth noting that some similar activities are emerging on an ad hoc and voluntary basis in Australia.

1. **PRODUCT BANS** – As per Article 5, certain SUP items like cotton bud sticks, cutlery (forks, knives, spoons, chopsticks), plates, straws, stirrers, balloon sticks, oxo-degradable plastics and expanded polystyrene (EPS) food containers and cups will be banned in the European Union from 2021.

Coca Cola in Australia has recently announced an intention to discontinue plastic straw distribution and numerous cafes etc around the country have also unilaterally moved in this direction.

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[*] Reloop Pacific is the regional arm of the EU based Reloop Platform https://reloopplatform.eu/

[†] https://www.greenindustries.sa.gov.au/SArecycling

There is no reason – i.e. there are existing more sustainable alternatives – SA could not replicate these bans.

2. **NEW COLLECTION ARRANGEMENTS - EPR SCHEMES** – As per Article 8, Member States will have to establish EPR schemes across a range of products by 2021.

Producers of SUP products including food containers, packets and wrappers, beverage containers, cups for beverages, tobacco products with filters, wet wipes, balloons, and lightweight plastic carrier bags will be expected to cover the costs of collecting waste consisting of those SUP products and its subsequent transport and treatment, including the costs of litter clean-up and awareness raising measures.

SA has shown with its CDS program that states can and must go-it-alone in developing EPR programs for a range of products. Additional states may then eventually follow.

Mutual Recognition exemptions have been provided to additional states in their recent adoptions of CDS. This 'free trade' argument against unilateral state action should not then be a barrier to reform.

3. **DESIGN REQUIREMENTS (INCL RECYCLED CONTENT REQUIREMENTS)** – Article 6 sets out product design measures for SUP beverage containers to ensure that their caps and lids remain attached (i.e. tethered) to the container during its use stage in order to improve recyclability and ensure they do not leak into the environment. In addition, there is a 25% target for recycled content in PET bottles by 2025 and 30% in all plastic bottles by 2030.

As outlined below SA should couple its CDS reform with the inclusion of recycled content incentives and policy settings, such as mandates. Interestingly glass is reported (by industry sources) already to have an average recycled content of around 37%. This can readily be raised to well above 50%. Also despite the energy and cost reductions from using recycled cullet, there is insufficient market demand for recycled glass on the east coast as markets are being disrupted by the import of cheap virgin glass containers from overseas. The application of recycled content requirements will help address market demand for recycled cullet as well as incentivise local production.

4. **BEVERAGE CONTAINER COLLECTION TARGETS** – Article 9 stipulates that Member States will be required to collect 90% of single-use plastic bottles with caps and lids by 2029, with an interim target of 77% by 2025. Deposit return schemes are suggested as a method to achieve this objective.

While states such as Germany, Netherlands, Sweden etc already have CDS with recycling rates in the high 90% other states such as Portugal, Spain, Italy do not yet have CDS programs and therefore drag current average recycling across the EU down. The 77% target therefore is relatively modest allowing for these differences.

It's recently been revealed that NSW historic container collection rate was around 32% - a long way from the previously reported 50%+[‡]. In a recent ABC online article[§] the NSW EPA are suggesting this rate has more than doubled to around 70% since the start of this scheme in late 2017.

5. **OTHER MEASURES**, include 'measurable quantitative' reduction in consumption of some single-use items (Article 4) and also labelling requirements (i.e. to inform consumers about appropriate waste disposal operations) and some additional awareness raising measures (Article 7).

[‡] 2014 Federal Decision RIS had the figure at 53.8%
[§] https://www.abc.net.au/news/2019-02-07/container-refund-scheme-cash-in-bin-chickens/10781228

Education is indeed important in the well-known waste hierarchy i.e. encouraging first 'Refuse, Reduce, Recycle' in priority. Kerbside collection education, what's in and what's out is an important example of what's required in order to help sustain the kerbside recycling system.

CONTAINER DEPOSIT SCHEME REFORM

It is obvious SA's CDS has led Australia's container recovery – at a current 76.9% it's far superior to the no-CDS states. For example, NSW now estimates its pre-CDS recycling rate of beverage containers at 32% (accurate supply data has now verified the relatively parlous state of pre-CDS, kerbside based recycling and these figures are likely to be reflected elsewhere. In addition, the supply of high-quality recycled materials, i.e. SA CDS glass and other materials have always attracted a price premium and SA is well endowed with glass manufacturing kilns supplied by domestically produced cullet.

Nevertheless, SA's CDS could be much better both for the consumer and as a resource recovery initiative. E.g. Michigan in the US with a US0.10cent (13 Australian cents) deposit has a recycling rate of over 90% largely it would seem because of its high levels of consumer convenience. And Oregon in the US is now developing a refillable sector – largely built around beer at this stage and at early-stage low volumes.

Both a higher recycling rate and the advent of refillable containers would be fantastic outcomes from this review – and surely two of the primary motivations of it. Recommendations as to how to achieve these outcomes are outlined below.

1. **COLLECTION POINTS AND SCHEME GOVERNANCE:** SA's CDS has long been criticized for excluding additional collection point operators / and encouraging competition and consumer convenience.

The SA CDS should now be opened up to additional entrants and modernized approaches for consumer engagement and convenience. This may include collection point automation and initiatives like 'bag drops', allowing consumers to redeem smaller volumes (week to week consumption rather than the current month to month which is understood to dominate the depot-based network) than they may currently. Including the possibility of retail centered collection infrastructure.

Beverage industry controlled super-collectors have blocked this kind of public interface reform by refusing to allow new entrants to gain a waste management arrangement to redeem containers at either Marine Stores or Statewide. The beverage industry (unlike the environment and community) is not motivated to see the SA CDS increase return rates as this requires further repayment of refunds and handling fees.

The only way SA CDS will become more effective (gather more materials) is through a regulatory intervention. This would prescribe that new entrants (where the private sector is of the view it can effectively compete) in the market should not be excluded from being able to return containers for the refund and appropriate handling fee to a super collector. It would also need to ensure that minor operational issues – e.g. logistics and sorting requirements - are not used by the super collectors as an alternative means to block entrants.

2. **RECYCLED CONTENT:** As policy makers mandate / regulate the recovery of secondary materials (this is to achieve both litter reduction and resource recovery objectives) through such mechanisms as SA's CDS so to should governments mandate / regulate the secondary reuse of these materials.

A 'circular economy' approach (the principle being the return of materials to their original use, rather than down-cycling to low value products) sees container materials being reused in new containers. This has the co-benefit of providing better markets for recycled material and therefore promoting higher recycling rates.

The SA government have an opportunity to lead the nation again in this regard by setting the standard for increasing targets of recycled content in CDS eligible containers sold in SA.

The SA government may prudently consider engaging additional CDS states in this (and other reforms) to avoid any possible 'mutual recognition' challenges and to retain the principle of scheme harmonisation. This should not however become a barrier to progress.

Glass recovery and recycling generally, extending from the advent of CDS, particularly in NSW and QLD, is on the up. Industry sources advise that the general average quantity of recycled glass in your beer bottle is now around 37%. This recycled-content is much higher at up to 62% in QLD manufactured bottles.

So, not only are we already getting good resource savings – virgin material reductions of 37% across the board – but there are additional energy and greenhouse gas savings from glass recycling. For this reason, the glass bottle industry wants cullet (glass pieces for recycling) and glass like aluminium is endlessly recyclable. Similarly PET bottles can be made from 100% recycled PET, yet only a fraction of recycled PET bottles are currently recycled back into bottles and overall recycled content is relatively low.

For every 10% increase in cullet going into the bottle manufacturers furnace 3% less energy and 5% less greenhouse gas emissions result. This is due to the fact the temperature of the furnace is reduced. All these savings in virgin resources, energy and greenhouse gas emissions in turn of course save producers money.

3. **ELIGIBLE CONTAINERS:** The current scope of containers eligible for a refund in SA has simply been replicated across new jurisdictions adopting CDS, i.e. NSW, QLD, ACT and WA.

This principle of 'harmonisation' is understandable. However, the stand-out exclusion from these schemes is wine bottles. This sub category of glass packaging should be included in SA's reformed CDS and it would seem a harmonisation agenda could readily see this adopted by other states. The exclusion of wine bottles from the NSW, QLD and WA schemes is simply based on those states desire to harmonies with SA's existing scheme.

O-I estimate a recycled content rate of an impressive approximate average of 37% and this could be much higher with the availability of clean, separated glass. The environmental, as well as resource recovery returns from recycling glass back into glass bottles are significant, including; reductions in greenhouse gas and energy emissions.

Glass like aluminium is endlessly recyclable. Including wine in CDS will benefit kerbside systems in all jurisdictions by further removing glass (a highly problematic material, often with no end market when processed through kerbside) from the commingled stream. Glass in kerbside is a well understood problem contaminating paper and cardboard. Poor quality mixed and contaminated glass can also become a stockpile problem and at best used in low value road base.

4. **INCREASED DEPOSIT:** The existing 10cent value of the refund is low by international standards and SA should increase this value to 20cents in two 5cent increments over the next 5 years.

This increased deposit rate is one of the primary mechanisms the SA government have for the reform of this scheme – i.e. to increase recycling rates, further reduce litter and perhaps even drive a refillables sector (further outlined below)

As the graph below outlines SA's 10cent rate is amongst the lowest globally.

Country	Population [M]	Return Rate	1. High Deposit Rate	$A	2. Mandated retail participation	3. Regulated target and penalty	4. Incumbency (CDS operating for 20-40+ yrs)
Germany	82.76	98.50%	√	0.33	√	X	√
Croatia	4.3	95%	X	0.1	√	√	X
Vermont (USA)	0.6	95%	X	0.06-0.18	√	√	√
Norway	5.2	95%	√	0.16-0.40	√	√	√
Netherlands	16.7	94.20%	√	0.33	√	X	√
Iowa (USA)	3.1	93.30%	√	0.06	√	X	√
Michigan (USA)	9.9	90%	X	0.13	√	X	√
Finland	5.5	89%	√	0.15-0.6	√	√	√
Maine (USA)	1.3	87%	—	0.06-0.18	√	X	√
Lithuania	2.85	86%	√	0.15	√	√	X
Oregon (USA)	3.9	85%	—	0.13	X	X	√
Sweden	9.98	85%	X	0.15-0.3	√	X	√
Estonia	1.32	84%	X	0.15	√	X	X
Saskatchewan (Canada)	1.13	83%	√	0.15-0.6	√	√	√
Nova Scotia (Canada)	0.9	82%	—	0.05-0.20	√	√	√
NW Territories (Canada)	0.04	82%	—	0.10-0.25	X	X	X
British Columbia (Canada)	4.4	82%	X	0.05-0.2	partial	√	√
Alberta (Canada)	3.6	81%	√	0.10-0.25	X	X	√
New Brunswick (Canada)	0.75	81%	√	0.05-0.1	√	X	√
Prince Edward Island (Canada)	0.1	79%	X	0.10-0.20	X	X	X
Manitoba** (Canada)	1.2	78%	X	0.1-0.2	√	X	X
Ontario (Canada)	12.9	77%	√	0.10-0.20	X	X	√
Yukon (Canada)	0.038	77%	—	0.10-0.35	X	X	√
Israel	8	77%	X	0.1	√	√	X
Denmark	5.75	76.50%	X	0.2-0.6	√	√	√
Hawaii (USA)	1.3	73%	X	0.06	√	X	X
South Australia	1.66	77%	X	0.1	X	X	√
California (USA)	38	70%	X	0.06-0.12	√	X	√

Quebec (Canada)	7.9	68%	—	0.05-0.20	X	√	√
Massachusetts (USA)	6.6	67%	X	0.06	√	X	√
Newfoundland (Canada)	0.5	64%	—	0.08-0.20	X	X	√
New York (USA)	19.5	61%	X	0.06	√	X	√
Connecticut (USA)	3.6	52.00%	X	0.06	√	X	√

5. **EXCLUDED MATERIALS:** PVC containers should not be eligible / allowed into the SA CDS. This material is largely unable to be differentiated in MRFs and sorting centres and contaminates particularly the PET recycling stream.

There is little use of PVC in the market and alternatives (e.g. PET) for this material are readily available. Drinks pouches are also a concern since they consist of multi-material laminates and are non-recyclable.

6. **REFILLABLE CONTAINERS:** A CDS allows refillable containers to return to the market place and SA could again lead Australia encouraging this segment of the market. This not only reforms the SA CDS but advances the states SUP agenda also.

Canada, with deposit schemes across all provinces, retains a 30% market share of refillable beer bottles. On average, these containers are returned for refilling 15 times. The European Union similarly retains around 32% market share in refillables, both plastic and glass; the Middle East has 21% and the Asia Pacific region market share of refillable containers is 30%.

It's estimated that Coca Cola's existing beverage supply includes 7% refillable PET and 12% refillable glass.

The U.S. state of Oregon, for example, through the Oregon Beverage Recycling Cooperative (OBRC)[**], has recently launched a multi-brand refillable beer bottle and logistics service under the existing 10-cent deposit / refund scheme. So far, the volumes are small at only around 2 million beer bottles per annum, but the resource savings are enormous and interest is growing.

OBRC estimates that the trippage rate for each refillable beer bottle is 25 times; in other words, their aim is that the average refillable beer bottle that goes through its system is filled, returned, washed and refilled 25 times before breakage and recycling. The standardized refillable bottle, which is produced by O-I, is thicker and heavier than other bottles, and utilised by multiple breweries with separate labelling.

While the 'original bottle' is marginally more expensive than the non-refillable container (as it's thicker and production volumes are lower), it's a one-off purchase and the only additional cost after initial supply is the washing.

CONCLUSION

The discussion paper provided is an exciting development toward a circular economy and aligns with public expectations that governments will act on the environmental problems posed by SUPs including drink containers.

[**] https://www.obrc.com/Content/Reports/OBRC%20Quarterly%20Report%20Q2%202018.pdf

ACOR members look forward to working with the SA government in all facets of the reform agenda outlined and bring considerable industry expertise and intelligence to this process. Reloop Pacific can additionally offer insights into developments with the EU's SUP Directive.

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