



**Australian Government**

**Australian Bureau of Agricultural and  
Resource Economics and Sciences**

## **COAG Standing Council on Environment and Water Packaging Options Cost Benefit Analysis for a Consultation Regulatory Impact Statement (CRIS)**

ABARES was requested to provide an independent assessment of the preparatory work for a Consultation Regulatory Impact Statement (CRIS), including the Cost-Benefit Analysis of options to address packaging waste impacts in Australia. The Cost Benefit Analysis report incorporates previous feed-back provided by ABARES and others. The report sets out the results of Cost Benefit Analyses for three sets of regulatory options: Non-regulatory, Co-regulatory and Mandatory.

The CBA undertaken follows a consistent methodology with the use of different approaches to estimate direct and indirect costs and benefits associated with each option. Within the limits of available data, methodological uncertainties in estimating non-market benefits, and the difficulties involved in estimating impacts on behavioural patterns of people, the analysis presented provides a useful basis for comparing the different options under consideration.

The CBA utilises information gathered from a range of sources including industry and community. These include verifiable published sources, other data collections and that derived from discussions held with stakeholders. ABARES role did not extend to verifying these sources, and the consultants indicate that the information contained has not been subjected to an Audit. The analysis should therefore be taken as indicative, both in terms of the benefit estimates and those of the costs of implementing the policies. It thus meets the purposes of a CRIS.

The sensitivity analysis undertaken on a number of variables provides a useful basis to manage the inherent weaknesses arising from uncertainty relating to the assumptions. Given the wide range of assumption based estimates presented it would have been helpful if the set of assumptions to which the results were most sensitive was identified. The analysis does indicate that the results are sensitive to key assumptions such as future recycling rates (as reflected in the sensitivity to the overall benefit estimates).

The report does not quantify the effect of ongoing changes in packaging technologies nor how such changes may be affected by incentives provided by the options under discussion, although projections have taken current trends into account. These factors may alter the net benefits of the different options and may be quite significant over the analysis period. These facts underline the need for adaptive or flexible policies. The longer term incentives for producers to reduce the waste burden, particularly through technological advancement need to be kept in mind. The extent of such change would partly depend on the detailed incentives induced by the implementation of various fees, levies or charges - under both the co-regulatory and mandatory options.

The precision of the cost and benefit estimates seems to vary across the options. This is due to the nature of the options and the extent of previous work carried out – such as for the CDL options. For example, the increased beverage container recycling rate assumptions for the CDL options are likely to be more precise than for the other options.

The non-regulatory and co-regulatory options are relatively low-cost, and represent choices that are likely to be more flexible. They have the advantage that they are less likely to be affected by a lack of precision, and even if the estimates were found to be less reliable the overall costs to society of the regulations would also be unlikely to be high. Ensuring the flexibility of the other options to adapt to costs and benefits that differ from those expected would need to be factored into their design.

If a CDL option were pursued following the CRIS more work may be needed to assess the impact on consumer behaviour; in particular the level of transaction or transition costs in moving consumers from a well-subscribed kerbside recycling regime to a CDL based system. In a high income country, such as Australia, the level of incentive required to gain private participation for public benefit may need to be further investigated. As income increases, the marginal benefit of income drops and as a consequence, people tend to become less sensitive to small gains. These behaviours can vary across regions and among different socio-demographic groups and the South Australian experience with a CDL scheme may not be fully indicative of what might happen at a national scale.

Also, as the home based recycling rates in Australia are already high any further gains in home-based recycling can only come at increasing costs. In other words, linear rates of increases in both the participation and recycling effort cannot be expected. While this may be less the case for away from home recycling it is possible that the cost of achieving the projected recycling rates may be significantly higher than estimated.

In this regard whichever option is chosen, an effective monitoring and evaluation program will help assess the rate of progress and allow government opportunities to refine the framework on an ongoing basis. This report demonstrates the limits of our understanding of the factors affecting the packaging life cycle. Further targeted research into recycling and littering behaviour may prove valuable in refining the implementation of current and future options. Such adaptation needs to be built into design of the options.

The treatment of the non-use value (WTP) of benefits of increased levels of recycling in the report is appropriate. It should be noted that the confidence intervals do not reflect the uncertainty involved in extrapolating the sample choice modelling estimates to the Australian population. As such, the confidence intervals relate to an upper bound on the non-use values associated with increased recycling. This is due to the methodology employed in the WTP study as well as the issues related to double counting that are mentioned in the report. ABARES concurs with the decision to leave out WTP estimates for litter reductions due to limitations discussed in the report. However the WTP study did demonstrate that non-use values for litter reduction are potentially significant. Although this analysis was only able to quantify litter reductions in a very limited way, the options under consideration provide an opportunity to realise some of these benefits.

It should be noted that within the time available, ABARES was unable to examine, in any detail, possible human error such as calculation mistakes that may be present.