Evaluation of the Operation of the Northern Territory Container Deposit Scheme

Department of Environment and Natural Resources

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Building a better working world

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1. Executive summary

The Northern Territory's Container Deposit Scheme (NT CDS, CDS or the scheme) was established under the *Environment Protection (Beverage Containers and Plastic Bags) Act* (the Act), and commenced 3 January 2012 – with the key objectives as stated in sections 3(a)(i) and (ii) of the Act to minimise environmental pollution by establishing a container deposit scheme to:

- *"reduce beverage container waste by providing communities throughout the whole of the Territory, as far as practicable, with access to facilities for the collection of empty containers and the payment of refund amounts",* and

- *"increase resource recovery, reuse and recycling."*

Section 50 (2) of the Act requires an evaluation of the operation of the CDS at five yearly intervals after the commencement of the CDS. Accordingly, the Department of Environment and Natural Resources (DENR) engaged EY to assist with an evaluation of the CDS. The key objectives of the evaluation was to:

1. Advise on the extent to which the CDS is meeting its objectives as stated in sections 3(a)(i) and (ii) of the Act

2. Consider operational aspects of the CDS and opportunities for improvement, including efficiency and effectiveness, with the overall aim of ensuring the CDS meets its objectives under the Act

3. Understand CDS stakeholder views to support opportunities for improvement

In considering whether the CDS was achieving the above mentioned objectives, the evaluation analysed the barriers and challenges to the CDS achieving the objectives, and sought to identify opportunities and solutions to the barriers and challenges experienced.

The evaluation concluded that the CDS was achieving objective 3(a)(i) and was reducing beverage container waste, as well as objective 3(a)(ii) and increasing resource recovery, reuse and recycling. There was a significant opportunity for improvement in meeting objective 3(a)(i) and providing communities throughout the whole of the Territory, as far as practicable, with access to facilities for the collection of empty containers and payment of refund amounts. The key findings of the evaluation indicated that:

- The CDS was achieving objective 3(a)(i) and was reducing beverage container waste based on the reduction in the proportion of beverage container waste in the litter stream, as well as the increasing trend observed for the redemption rate[1] achieved to date.

    - The proportion of regulated containers in the litter stream decreased from 5-10% prior to the commencement of the CDS to 3.1% in the first year of the commencement of the CDS, and maintained an average of 3.1% across the first five years of operation of the CDS.

    - The redemption rate under the CDS increased over its first five years of operation, from 29% in 2012/13 to 60% in 2016/17. With an annual average redemption rate of 47% from 1 July 2012 to 30 June 2017), there remains opportunity for improvement to continue to increase the amount of redeemed containers.

[1] Refer to the Glossary of terms in Appendix A for a definition of redemption rate.

- The CDS's redemption rate was below redemption rates for other schemes[2], which have typically achieved redemption rates of between 70 and 90%. The NT CDS's redemption rate does however need to be interpreted within the context of the CDS's relatively short time in operation and the demographic and geographic features of the NT (relatively small and isolated population centres, and large size of the NT).

- Opportunities exist for further reducing beverage container waste and increasing redemption rates, including simplification of the scope of containers covered under the scheme, increasing convenience of collection points and raising community awareness and knowledge.

  - The exclusion of certain beverages from the CDS, while based on presence in the litter stream, can appear to consumers and members of the public to be arbitrary, leading to confusion over which containers can be delivered to the CDS for redemption. Simplification and consistency of containers included, focusing on type and material, would improve clarity for consumers and would support increased redemption rates. A more clearly defined and consistent approach to determining the scope of containers regulated under the scheme is recommended, as well as the inclusion of additional containers.

  - Further recommendations include promoting the establishment of collection points and reverse vending machines (RVMs) at retail outlets and precincts (and other areas of high public foot traffic), as well as an increased focus on communication and awareness raising for the CDS, including providing accurate and up-to-date information on the types of containers regulated under the scheme and the location and details of collection facilities.

- Opportunities also exist to improve in "*providing communities throughout the whole of the Territory, as far as practicable, with access to facilities for the collection of empty containers and payment of refund amounts*".

  - Many stakeholders reported a lack of access to collection facilities, in particular in remote communities due primarily to issues associated with the ability to ensure the ongoing operation of collection points in remote communities. Collection points are the primary means for remote communities to access collection facilities, and participate in the CDS.

  - Stakeholders noted that collection points in remote communities were susceptible to "key-person risk", where a key-person or organisation within the community often drove the on-going participation and promotion of the CDS in the community. The on-going success of the remote communities' participation in the CDS was therefore directly linked to the key-person's ongoing efforts to promote participation in the CDS.

  - A key recommendation is therefore for the NT EPA to actively engage and provide ongoing support to key-persons in remote communities to ensure the ongoing, sustainable operation of collection points in remote communities.

- The CDS was achieving objective 3(a)(ii) and increasing resource recovery, reuse and recycling, as evidenced by the CDS's upwards trending annual average return rate[3] of 46% achieved to date.

  - However, there remained opportunity to increase the scheme's return rate by, amongst others, setting resource recovery/return rate targets for CDS Coordinators as allowed for under section 49 of the Act.

[2] For example, South Australia's "return rate" of 79.9% (for 2016/17), Norway's "return rate" of 95% (2014), and California's "return rate" of 77%. Note - at times schemes referenced use "redemption rate" and "return rate" interchangeably. For the purposes of this report, the definitions applied to "redemption rate" and "return rate" as outlined in the Glossary of terms in Appendix A were applied to ensure that, as far as reasonably practicable, "return rates" reported by other schemes were "redemption rates" and thereby comparable to the NT CDS's redemption rate referenced. However, some inconsistencies may remain. Refer to the Glossary of terms in Appendix A for the definitions of redemption rate and return rate applied.

[3] Refer to the Glossary of terms in Appendix A for a definition of return rate.

- Additionally, due to inconsistent data collation and reporting on whether returned containers were reused or recycled (as proxies for resource recovery) or otherwise appropriately disposed of, there was insufficient data to provide a definitive conclusion as to what extent the CDS was increasing resource recovery. Survey respondents also identified this as a challenge for the CDS to address.

- Feedback from stakeholders suggested that the lack of clarity about the end use of containers returned to the scheme, may prevent people from participating in the scheme, if they think that the containers will go to landfill regardless.

EY additionally identified a number of operational improvements and recommendations to ensure the CDS continues to meet its objectives under the Act, as summarised below:

Recommendation 1: Consider the rationale and approach to excluding beverages and exempting containers from the scheme in order to ensure a well-defined, clear, and consistent container scope, which is aligned to all key objectives of the CDS.	**Priority:** High
Recommendation 2: Determine the feasibility of including additional containers as regulated containers, considering specifically wine/spirituous liquor containers and milk bottles as well as excluded beverages and exempt containers where a similar container is currently a regulated container.	**Priority:** High
Recommendation 3: Increase focus on communication and awareness raising about the CDS, including providing accurate and up to date information on the types of containers regulated under the scheme.	**Priority:** Medium
Recommendation 4: Remove the requirement for a statutory declaration to be signed for deposits of 1,500 containers or more.	**Priority:** High
Recommendation 5: Shift the focus of the NT EPA from a clerical administrative role, to an advocacy, compliance and audit function, in order for the NT EPA to play a more strategic management and oversight role in the CDS. Assess the NT EPA's resource allocation (both financial, human and technological) to determine additional resource requirements in order to support the desired function and role in the CDS.	**Priority:** High
Recommendation 6: Work with CDS Coordinators, Collection Depot Operators and retailers to promote the establishment of RVMs at retail outlets and precincts and other areas of high public foot traffic. Retailers could also be encouraged to set up collection points in partnership with a community organisation/charity and all proceeds donated to that community organisation/charity.	**Priority:** High
Recommendation 7: Provide better information to the public on options available to deliver containers to CDS facilities on the NT EPA website and social media platforms. This may include an interactive map of collection depots and collection points and information on community organisations that collect from home or the workplace.	**Priority:** Medium
Recommendation 8: Develop and implement clear guidelines for the establishment of collection depots that include considerations for the geographic location of collection depots and an analysis of potential demand.	**Priority:** Medium
Recommendation 9: Promote the establishment of collection points, in particular in remote communities, and investigate the establishment of a database of collection points.	**Priority:** High
Recommendation 10: Identify, engage and support "key-persons" (individuals or organisations) in remote communities to promote establishment of collection points and the on-going participation in the CDS in remote communities. Facilitate access to training and support to the individual or organisation to engage with the community to expand the awareness and participation in the CDS.	**Priority:** High
Recommendation 11: Facilitate better access to CDS infrastructure grants and provide on-going support to grant recipients to facilitate ongoing sustainable operation of collection points operated by grant recipients.	**Priority:** High

Recommendation 12: Work with key stakeholders and facilitate strategic partnerships to extend access to the CDS in remote communities (for example, through the use of back-loading provided by logistics companies).	**Priority:** High
Recommendation 13: Set resource recovery/return rate targets for CDS Coordinators as allowed for under section 49 of the Act.	**Priority:** High
Recommendation 14: Establish a requirement for the improved reporting of the reuse and recycling of containers. Ensure the monitoring and reporting of the reuse and recycling of containers is sufficiently robust to ensure its accuracy and reliability.	**Priority:** Medium
Recommendation 15: Explore and identify opportunities to promote circular economic activity and the domestic recycling of materials through the expansion and promotion of the domestic recycling industry and markets for recycled material.	**Priority:** Medium
Recommendation 16: Develop a set of clear, step-by-step guidelines and FAQs for applicants describing the approval process and the required documentation.	**Priority:** Medium
Recommendation 17: Identify inefficiencies in the container approval process and implement appropriate changes to eliminate or reduce inefficiencies identified and streamline the process.	**Priority:** High
Recommendation 18: Consider the potential for a “once off” approval for Manufacturers/Suppliers, as opposed to the on-going approval of each beverage container a Manufacturer/Supplier supplies into the NT, and allow Manufacturers/Suppliers to “self-regulate”.	**Priority:** High
Recommendation 19: Advocate the adoption of a coordinated approach and or mutual recognition of container approvals across participating states and territories in Australia. As more schemes are established (for example Queensland and Western Australia), which have similar if not identical container scope, it would be more efficient for a centralised system of approvals to be used.	**Priority:** Medium
Recommendation 20: Assess the technology systems utilised in the container approval process. Determine whether technology systems are fit for purpose and implement automation into the technology systems.	**Priority:** Medium
Recommendation 21: Investigate the potential for unclaimed/unredeemed refunds, either as a whole or in part, to flow through to the development of the CDS.	**Priority:** Medium

As part of the evaluation, stakeholder consultation was undertaken to gain an understanding of the barriers and perceived success of the CDS, as well as understand stakeholder views as to whether the CDS was meeting its primary objectives set out in the Act. Stakeholders were consulted via face-to-face and telephone interviews, as well as an online survey. Written submissions received were also considered as part of the stakeholder consultation.

Key insights attained from the stakeholder consultation included[4]:

- **Success of the CDS:** Overall 82% of respondents rated the CDS 'successful' or 'very successful', with only 9% selecting that it was 'not successful' and another 9% selecting 'neither successful nor unsuccessful'. Of the stakeholder groups responding to the survey question on whether or not they perceived the CDS to be successful, 9 out of 16 Manufacturers/Suppliers, 3 out of 5 CDS Coordinators and 3 out of 3 Collection Depot Operators indicated the CDS was 'successful'. Stakeholders interviewed also indicated that the CDS was successful, noting that some opportunities for improvement remained.

- **Reasons for participating in the CDS[5]:** 81% of members of the public who participated in the survey indicated they participated in the CDS because they were environmentally conscious, 67% because of the 10c refund, and 26% to help community organisations raise money.

- **Method of participation in the CDS[6]:** Of the members of the public who participate in the CDS and participated in the survey, 76% delivered containers to collection depots, 22% placed containers in recycling bins, and 12% delivered containers to collection points.

- **Barriers to participation in the CDS:** Of the survey respondents, 46% said the largest barrier was due to some containers not being accepted as part of the CDS, and 25% said they had poor knowledge/understanding of which containers could be redeemed. Similarly, for Community organisations (45%), Collection Point Operators (CPOs) (67%), Collection Depot Operators (67%) and Government stakeholders (75%), their largest barrier was also "Some beverage containers are not accepted as part of the scheme".

- **Community awareness:** Less than half the respondents thought the general public was well informed about the CDS, and only 61% thought community organisations were well-informed.

- **Role of the NT EPA:** The majority of opinions received through the survey on the NT EPA's performance in delivering various outcomes and activities was 'don't know' or ambivalent, indicating that the NT EPA's role was not well understood.

- **Containers for potential inclusion in the CDS:** There was support across surveyed stakeholder groups for the addition of wine bottles and milk bottles to the scheme, but overall less support for take-away beverage containers. Only 18% of CDS Approval Holders indicated that no beverage containers should be added to the scheme, and another 15% indicated they did not know which containers could be included in the CDS. Of CDS Approval Holders, 56% indicated wine bottles and 47% indicated milk bottles could be added to the scheme. Of Government stakeholders surveyed, 85% indicated wine bottles and 75% indicated milk bottles could be added to the scheme.

[4] Quantitative findings shown here are predominantly taken from the online survey, however the themes identified incorporate perspectives gathered through interviews and written submissions received and these were found to be aligned with the survey results.

[5] Results total more than 100%, since survey respondents could select multiple answers.

[6] Results total more than 100%, since survey respondents could select multiple answers.

2. Introduction

The Northern Territory's Container Deposit Scheme (NT CDS/CDS or 'the scheme') was established under the *Environment Protection (Beverage Containers and Plastic Bags) Act* (the Act), and commenced 3 January 2012 – with the key objectives as stated in sections 3(a)(i) and (ii) of the Act to minimise environmental pollution by establishing a container deposit scheme to:

- *"reduce beverage container waste by providing communities throughout the whole of the Territory, as far as practicable, with access to facilities for the collection of empty containers and the payment of refund amounts" and*
- *"increase resource recovery, reuse and recycling."*

Section 50 (2) of the Act requires an evaluation of the operation of the CDS at five yearly intervals after the commencement of the CDS. Accordingly, the DENR engaged EY to assist with the evaluation of the CDS.

EY's scope of work broadly included:

- Consulting CDS participants (Coordinators, Depots, Collection Point Operators and Manufacturers/Suppliers), members of the public, community organisations, industry associations and local government
- Producing a report evaluating the operation of the CDS that advises on the extent to which the CDS is meeting its objectives and identifies challenges, opportunities, and solutions

In undertaking the assessment, EY applied its evaluation framework which is based on internationally recognised leading approaches, including the Australasian Evaluation Society Guidelines[7] and the Western Australian Department of Treasury Evaluation Guide 2015[8]. The evaluation focused on the aspects identified by the DENR, which broadly included operational efficiency and effectiveness of the CDS.

The key objectives of the evaluation were to:

1. Advise on the extent to which the CDS is meeting its objectives as stated in sections 3(a)(i) and (ii) of the Act
2. Consider operational aspects of the CDS and opportunities for improvement, including efficiency and effectiveness, with the overall aim of ensuring the CDS meets its objectives under the Act
3. Understand CDS stakeholder views to support opportunities for improvement

This report presents the findings and recommendations from the evaluation. The report is structured as follows:

- A brief overview of the CDS is provided in section 2.1, including its design and operation
- Section 2.2 outlines best practice principles utilised to achieve efficient and effective operation of container deposit schemes and provides a guide for some of the recommendations made
- Stakeholder perspectives gathered through interviews and an online survey are presented in section 3
- Detailed findings and recommendations are presented in section 4
- The report concludes with a brief conclusion in section 5

[7] Australasian Evaluation Society, 2013, Guidelines for the Ethical Conduct of Evaluations.

[8] Program Evaluation Unit 2015, Evaluation Guide, Department of Treasury, Government of Western Australia, Perth.

2.1 Overview of the NT CDS

2.1.1 Governance and administration

The NT CDS entered into operation in January 2012, and was designed to largely mirror the South Australian Container Deposit Legislation (CDL). As such, the NT CDS is an industry operated scheme, where the NT Environment Protection Authority (NT EPA) regulates CDS activities (including licencing, granting and administering CDS approvals, compliance, enforcement and monitoring and evaluation). The DENR has responsibility for the overall administration of the scheme, including providing personnel to the NT EPA to:

- Provide advice and assist the NT EPA to meet its regulatory obligations with respect to the CDS
- Provide strategic policy advice to Government with regards to the scheme, including how the scheme is contributing to addressing the Government's environmental policy objectives, as well as national/whole of Government commitments
- In line with Government objectives, participate in national working groups and forums to inform the development of container deposit schemes in other jurisdictions and ensure that existing / emerging schemes are consistent as far as practicable

CDS Coordinators (analogous to a Super Collector in the SA CDL) have primary responsibility for the implementation and operation of the scheme. CDS Coordinators accept, handle and deliver for reuse, recycling or other appropriate disposal, regulated containers received from collection depots and collection points.

There are currently four approved CDS Coordinators overseeing the activities of the CDS, namely:

- Can-Recycling (SA) Pty Ltd (trading as Statewide Recycling)
- Envirobank NT Pty Ltd
- Marine Stores Pty Ltd
- NT Coordinators Pty Ltd

In order to operationalise the scheme, CDS Coordinators enter into waste management arrangements (WMAs) with scheme approval holders/participants (including Manufacturers/Suppliers and Collection Depot Operators). The key WMAs include:

- Coordinator arrangement – a WMA entered into between all CDS Coordinators
- Supplier arrangement – a WMA entered into between a beverage manufacture/supplier and a CDS Coordinator
- Operator arrangement – a WMA entered into between a CDS Coordinator and Collection Depot Operator

Various amendments to the Act have sought to improve the operation of the scheme, including an amendment requiring commencement of operations under approved "coordinator arrangements". Other provisions commenced following amendments in June 2014 to improve the scheme's operation, which included requirements for approval holders to negotiate, form and obtain approval of arrangements (such as the Coordinator arrangement/s, and Operator arrangements that allow Collection Depots to enter into arrangements with one CDS Coordinator) to facilitate their operation within the scheme as it currently is – i.e. when provisions and the coordinator arrangement commenced in January 2017.

2.1.2 Operations

Regulated containers are redeemable at collection depots and reverse vending machines (RVMs) Collection depots provide the primary facility at which members of the public, community organisations and Collection Point Operators (CPOs) redeem regulated beverage containers and collect the 10c refund. There are currently 9 approved Collection Depot Operators in the NT, as shown in Table 1.

Table 1: Approved Collection Depot Operators

Collection Depot Operator	Collection Depot Location
Bevcon Recycling Pty Ltd	33 Pruen Road, Berrimah Mataranka Recycling Centre, Lot 84, Stuart Highway, Mataranka
Darrin's Rubbish Removal	Unit 1/26 Irvine St, Tennant Creek
Envirobank Recycling (Australia) Pty Ltd	35 Wilkinson Street, Alice Springs NT 41 McKinnon Road, Pinelands Envirobank RVM, Charles Darwin University, Casuarina Envirobank Mobile (based at Pinelands depot, servicing Waigat, Jabiru)
Greg Meyer Paving Pty Ltd trading as Territory Can Man	102 Winnellie Road, Winnellie
Humpty Doo Regional Recycling Pty Ltd	Shed 1, 56 Spencely Road (L/4254), Humpty Doo
M.T. Bins Pty Ltd	Shed 5, Bovril St, Katherine
Murlran Pty Ltd (t/a Bagnall Agencies)	4-6 Lewis St, Elliott
NT Recycling Solutions Pty Ltd	19 Pruen Road, Berrimah
Revive Recycling Pty Ltd (t/a 'iReturn') (Recently renamed TOMRA Collection Pty Ltd)	11 Tang Street, Coconut Grove

Collection points provide an alternative avenue to deliver regulated containers, particularly in smaller or remote communities where it may not be feasible to establish a collection depot. Collection points are usually operated by community groups, schools and sporting clubs (referred to as Collection Point Operators, or CPOs). Regulated containers can only be *delivered* to collection points and not *redeemed* at collection points, i.e. the 10c refund cannot be paid at a collection point, as the 10c redemption can only occur at collection depots. Members of the public can deliver their regulated containers to collection points in order for that organisation to raise funds by collecting the 10c refund itself.

RVMs are not currently widely available, with a single stand-alone RVM located at Charles Darwin University, and RVMs incorporated into iReturn's / TOMRA's collection depot operations in Coconut Grove.

2.2 Review of best practice

Container deposit schemes are a form of extended producer responsibility (EPR) policy, which seek to better manage environmental life cycle impacts of products by encouraging or mandating producers take certain actions. The most common trigger for EPR schemes is where excessive waste generation is seen to be an issue affecting the environment or health and safety including public health.

In Australia, at a national level, a Co-Regulatory Product Stewardship Scheme exists for waste televisions and computer monitors, while schemes are being considered for products as diverse as batteries, plastic microbeads, used oil containers, and photovoltaic panels.

Container deposit schemes are in place in Australia in South Australia (SA), Northern Territory (NT) and New South Wales (NSW). Western Australia (WA), the Australian Capital Territory (ACT) and Queensland (QLD) are all planning to launch schemes in the next 12 months. Internationally, schemes are well-established in most European countries, North America and Canada. A desktop review of container deposit schemes in these countries identified the following key areas of best practice.

2.2.1 Container scope

A well-defined, clear, and consistent container scope

There is evidence of cases where industry has modified container sizes or product formulations to reduce liability under a scheme, taking advantage of scope delineations. For example, in Germany, specific diet drinks were exempt under the scheme. Industry argued that this should include existing 'sugar free' drinks, even though they were not specifically diet drinks. This required passing of additional legislation to close the loophole.[9]

Changes to the scope of the container deposit scheme can lead to lower redemption rates. This is due to consumers becoming confused about the types of containers that can be delivered to the scheme for claiming the refund amount. For example California found that when the container scope was broadened to include non-alcohol, non-carbonated containers, there was a decline in redemption rates due to confusion over what could be redeemed.[10] An education campaign was required to help consumers better understand the new container scope and improve redemption rates.

There is also evidence that inconsistent container scope across markets can increase cost and burden on industry and the operation of the scheme. For example, it was proposed that NSW's exclusion of containers smaller than 150 ml when these containers were accepted in SA and NT would create additional labelling costs and potential confusion for consumers.[11]

2.2.2 Access to the scheme

Convenient container collection infrastructure for consumers

While there is no single best practice container collection infrastructure identified in the literature, the Western Australian Stakeholder Advisory Group (formed by the then Minister for the Environment, Hon Dr Judy Edwards MLA in January 2006 to investigate best practice CDS for WA) recommended that a best practice CDS would utilise *"different methods to collect applicable deposit containers to suit local conditions*" including consideration of cultural, socio-economic and geographic considerations.[12] Schemes that achieve high redemption rates align container collection infrastructure to consider such factors. For example Norway, which achieved a redemption rate of 95% (2014), offers convenient container collection infrastructure tailored to the needs of consumers. Consumers can deliver containers in stores, at a RVM at the store, or at depots. The location of RVM in stores improves security and provides access to necessary infrastructure (for example power).

In the design of the ACT scheme, consumer surveys favoured an over the counter, face-to-face collection model over RVM.[13] As a result the ACT scheme will not initially feature RVM as part of the scheme's container collection infrastructure. This indicates the importance of tailoring container collection infrastructure options to consumer preference.

When the NSW scheme was first launched, a lack of container collection infrastructure led to negative publicity due to the number of container collection points not meeting community expectations.[14] This demonstrated the importance of offering collection opportunities that considered geographic factors as consumers were faced with travelling long distances to deliver containers to a collection depot to redeem the refund for the containers. In relation to this issue, the Stakeholder Advisory Group for the Western Australian Container Deposit Scheme identified that a best practice scheme would "compensate regional areas for the extra costs of transport over large distances". [15] There is evidence

[9] Hyder Consulting, 2009, Feasibility Study of a Container Deposit System for Tasmania, p10

[10] Hyder, op cit., p 11.

[11] Boomerang Alliance, 2016, Review of proposed NSW CDS and Legislation.

[12] Stakeholder Advisory Group on Best Practice Container Deposit Schemes for Western Australia, 2007, *Final Report*, https://www.wasteauthority.wa.gov.au/media/files/documents/cdssagcommunique.pdf
op cit., p vi

[13] ACT Government (website), Frequently Asked Questions. Viewed 5 April 2018, https://www.actcds.com.au/downloads/ACT_Container_Deposit_Scheme_FAQs.pdf

[14] ABC News (online), *First day of NSW container deposit scheme and residents already want more*. 4 December 2017. Viewed 12 April 2018, http://www.abc.net.au/news/2017-12-02/first-weekend-of-nsw-container-deposit-scheme/9219978.

[15] Stakeholder Advisory Group on Best Practice Container Deposit Schemes for Western Australia,

in the literature that Croatia and Canada have implemented differential transport fees based on distance, indicating that this approach is being applied internationally.[16]

2.2.3 Scheme funding

Scheme funding provides adequate incentives

The Norwegian scheme represents a best practice example of providing a financial incentive for industry to achieve higher redemption rates. Infinitum, previously Norsk Resirk, was created by the food and beverage industry to develop and operate a deposit and recycling system for non-refillable beverage packaging (aluminium cans, steel cans and PET plastic recyclable bottles). Norwegian environmental regulations state that all eligible containers (non-refillable beverage containers) are taxed at a variable environmental tax rate by the government, payable by the beverage supplier to cover the cost of recycling the packaging. This environmental tax is then adjusted based on the rate of containers redeemed. If the redemption rate is greater than 25% the environmental tax is reduced on a sliding scale to a zero tax rate if the redemption rate reaches 95% (i.e. the environmental tax is fully refunded).

Under the scheme, it is not compulsory for suppliers to charge a refundable refund, those who do not are required to pay the full tax (both the basic tax and environmental tax).[17] All beverage producers and importers can pay a refund amount to Infinitum to label their containers with the refund symbol. When empty containers are redeemed at retailers by consumers, who receive the refund amount they paid upon purchase, the producers and importers receive the refund amount from Infinitum. Infinitum then record, process and prepare containers for recycling using their own facilities and those of regional partners. Containers are then sent to recycling facilities. This approach creates a direct financial incentive for beverage suppliers to encourage higher redemption rates. Sign-up fees, per container refund fees and collection/ logistics fees help fund Infinitum.

Membership fees paid by retailers include the refund amount (of 1,- kroner or 2.50,- kroner for each container), as well as a handling fee (of 5 øre per can and 10 øre per plastic bottle). Infinitum pays retailers a fee to cover the cost of handling redeemed containers[18] (Note that Norway has a high adoption of re-fillable containers, which is also managed by Infinitum.) Although this scheme is operated by a non for profit and the operational structure of the scheme is significantly different to the CDS, there are opportunities to learn from this example and provide positive financial/ tax incentives for scheme participation and incentivise high redemption rates.

Examples both locally and internationally indicate that refund amounts may have to increase over time to ensure continually high redemption rates are achieved. For example, the South Australian refund amount was raised from 5c to 10c in 2008 after redemption rates started to decline. California's Container Redemption Value was increased in 2007 from 4c to 5c for containers less than or equal to 710 ml in capacity, and from 8c to 10c for containers greater than 710 ml.[19]

Best practice schemes also need to consider the potential for fraud when setting refund amounts, and have risk prevention measures in place. Higher incentives (higher refunds) naturally increase the risk of fraud and therefore the complexity of prevention measures. For example, when considering the design of the proposed Tasmanian scheme, a 20c refund amount was proposed, but it was noted that this would increase the risk of fraud (compared to a 10c refund amount) and that "enforcement efforts will need to be adequately designed and funded".[20]

In Germany, where refund amounts were set at a high level, the risk of fraud increased and required increased security arrangements. These included replacing barcodes on packaging with special inks specific to the scheme.[21]

[16] CM Consulting, Deposit systems for one way beverage containers, global overview, 2016, viewed 5 April 2018, http://www.cmconsultinginc.com/wp-content/uploads/2017/05/BOOK-Deposit-Global-24May2017-for-Website.pdf

[17] Infinitum (website), *The environmental tax system*. viewed 5 April 2018, https://infinitum.no/english/the-environmental-tax-system

[18] Deposit System Law Norway (website) viewed 24 May 2018, http://anker-andersen.dk/deposit-laws/norway.aspx

[19] Hyder Consulting, op cit., p 15

[20] Hyder Consulting, op cit., p52

[21] Hyder, op cit., p15

Examples of fraud include containers where no deposits have been paid (for example those from outside the scheme jurisdiction) being presented for refunds, and containers being claimed more than once. In Michigan (USA), containers were being shipped from other jurisdictions to claim refund amounts. Reports of up to 20,000 containers from outside the state being processed through RVMs led to the engagement of law enforcement to prevent the trade.[22]

Another fraud risk is where operators of RVMs scan containers multiple times before they are crushed. An approach to reducing this risk is to use automated RVMs equipped with compactors which prevent containers being re-scanned.[23]

Fraud risk also arises through inadequate processes for ensuring accountability in data and financial flows. The Hawaii State Auditor found potential for fraud to occur across the scheme and cited an example where operators were overstating container numbers when making claims for payment, suggesting that refunds were being paid on containers that "did not exist".[24]

Fraud risks potentially apply to the NT scheme, and adequate processes, and assurance over those processes, are required to ensure that the scheme does not suffer the same issues that have impacted other schemes. However, due to its relative geographic isolation, one area where the NT scheme is at a reduced risk of fraud is the risk of refunds being claimed on containers purchased outside the scheme. It has been found that island locations such as Hawaii and Tasmania are considered to be less at risk of containers from outside the scheme being claimed. Northern Territory's geographic isolation puts in in a similar category to these examples.

Provide multiple ways for refunds to be redeemed

There is a range of methods through which payments can be made to repay refunds to consumers. While no specific best practice was nominated in the literature, in the interests of convenience for consumer, schemes typically offer a range of ways that consumers can receive credits. The NSW scheme, for example, offers three ways in which consumers can receive their refunds. These include payment to a charity, electronic funds transfer to their designated account, or redeeming their refund as a voucher cashable in store.[25] The approach of redeemed refunds being paid directly into bank accounts is similar to other schemes, for example the Danish scheme.[26]

Use unclaimed/unredeemed refunds to strengthen the scheme

All container deposit schemes around the world, including Australia, have redemption rates below 100%, and therefore the potential for refund amounts not to be claimed/redeemed. Unclaimed/unredeemed refunds are refund amounts (deposits) that were paid on containers, but the containers are not redeemed through and returned to the scheme. This can happen where containers are discarded to landfill, turned into litter or otherwise not delivered to collection depots.

Under some schemes, including the NT and NSW, waste contractors contracted by councils for kerbside recycling have arrangements with approved depots to claim refunds in exchange for eligible containers collected by the waste contractor from kerbside recycling bins. However not all waste contractors will have agreements in place and as a result in some cases containers disposed of in kerbside recycling bins will also contribute to unclaimed/unredeemed refunds.

[22] Detroit News, *Crushing bottle deposit fraud.* December 2008, viewed 5 April, http://www.bottlebill.org/news/articles/2008/MI-12-2-CrushingBottleDeposit.htm

[23] http://anker-andersen.dk/deposit-laws/germany.aspx

[24] Ibid.

[25] NSW Environment Protection Agency (website), *NSW Container Deposit Scheme – how to use collection points*, viewed 5 April 2018, http://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/return-and-earn

[26] http://anker-andersen.dk/deposit-laws/germany.aspx

In most schemes revenue from unclaimed/unredeemed refunds is used, directly or indirectly, to support funding of the scheme. [27] In some cases, the beverage industry keeps the funds and uses it to cover their costs (for example in Germany) and in other cases the unclaimed/unredeemed refunds become the property of the government (for example a number of US states including California and Hawaii). In Denmark, unclaimed/unredeemed refunds can also be provided to relevant 'social and environmental programs'. [28] It should be noted however that schemes with a separate fund for unclaimed refunds rely on a clear understanding of how costs are attributed throughout the scheme, to ensure additional costs are not placed on the consumer by the product suppliers.

A best practice approach is where a separate fund is established from unclaimed refunds, managed separately from industry and government and used exclusively to make improvements to the scheme (for example by improving redemption rates). When a CDS was first being considered for WA in 2006/07, the Stakeholder Advisory Group recommended that a best practice CDS would require a fund to be established from unclaimed/unredeemed refunds, to assist the independent body established to run the scheme achieve its functions.[29]

Under the NSW scheme, fees to beverage producers are only charged based on actual monthly sales, and are reconciled against actual redemption volumes. The scheme coordinator retains 87% of unclaimed refunds, providing the remaining 13% to scheme participants. The aim of this approach is to utilise funds associated with unclaimed/unredeemed refunds for supporting operational improvements to the scheme, while providing beverage producers fees to cover costs associated with participating in the scheme.

[27] CM Consulting, Deposit systems for one way beverage containers, global overview, 2016, viewed 5 April 2018, http://www.cmconsultinginc.com/wp-content/uploads/2017/05/BOOK-Deposit-Global-24May2017-for-Website.pdf

[28] http://anker-andersen.dk/deposit-laws/denmark.aspx

[29] Stakeholder Advisory Group on Best Practice Container Deposit Schemes for Western Australia, *Final Report*, 2007, https://www.wasteauthority.wa.gov.au/media/files/documents/cdssagcommunique.pdf

3. Stakeholder consultation

Stakeholder consultation was a key component of the evaluation of the CDS. Ensuring stakeholder views were captured and understood was critical to understanding what is working well, as well as barriers and opportunities for improving the operation of the CDS.

3.1 Methodology

Stakeholder consultation was undertaken to gain an understanding of the barriers and perceived success of the CDS and whether it had met the primary objectives set out in the Act. Stakeholders were consulted through face-to-face and telephone interviews, as well as an online survey. Stakeholders consulted as well as the number interviewed and survey responses received are shown in Table 2.

Table 2: Stakeholders consulted

Stakeholder category / group	Number interviewed	Number of survey responses received
DENR and NT EPA Staff	4	N/a (included in 'Members of the public')
Manufacturers/Suppliers	0	24
CDS Coordinators	4	7**
CDS Collection Depot Operators	7	3
Local governments and Local Government Association of the Northern Territory (LGANT)	4	15
Legislative Assembly members	2*	5
Community organisations/Non-governmental organisations (NGOs)	1	27
Members of the public	0	618
Industry representatives	1	5
Other	0	6

* Note: includes one interview and one written submission received.
** Note: the number of survey responses received for CDS Coordinators was greater than the number of approved CDS Coordinators, due to the ability of survey respondents to self-identify and more than one individual responding to the survey on behalf of the CDS Coordinator.

As can be seen from the above list of stakeholders, the consultation included those directly involved in the operation of the CDS, as well as those who are affected by or participate in the CDS.

Face-to-face and telephone interviews were undertaken through semi-structured interviews, according to the themes shown in Table 3 below. Stakeholders were invited to share their views on the positive aspects of the CDS, as well as the barriers to participation.

Table 3: Interview themes and objectives

Interview theme and sub-themes	Objective
Governance and administration *Regulatory framework (Policy, legislation and regulation)* *Approvals and management processes* *Ongoing monitoring and reporting*	To understand views on the current governance and administration of the CDS, its efficacy, what is working well, challenges and opportunities for improvement
Operations *Community group and consumer awareness and participation* *Infrastructure* *Containers and labelling*	To understand views on how the CDS can be improved to support increased participation in the CDS and thereby increased rates of return and redeemed containers. Further, to understand what operational aspects are working well and what can be done to improve operational aspects of the CDS
Funding *Funding arrangements* *Unclaimed/unredeemed refunds*	To understand views on the funding arrangements of the CDS and opportunities to improve
NT EPA focus areas *Destination of returned containers* *Increasing access for remote communities* *Community awareness and participation*	To understand the destination of containers, identify opportunities to improve remote community access to the CDS and further understand community awareness and participation in the CDS

In addition to the interviews, an online survey was conducted in February and March 2018, receiving a total of 714 responses. Survey questions were aligned to the interview themes shown above and sought to further test the initial findings made through the interviews. Survey respondents were grouped into the categories shown in Table 4 for the purposes of analysing their perspectives.

Table 4: Stakeholder categories

CDS Approval Holders	CDS Coordinators CDS Collection Depot Operators Beverage Manufacturers/ Suppliers
Community Organisations	CDS Collection Point Operators Community organisations
Member of the public	Members of the Public
Government Stakeholders	Local Government Legislative Assembly Members
Other Stakeholders	Industry Association Other

Written submissions were received from two stakeholder groups. Comments received via written submissions were taken into consideration along with views gathered through the interviews and online survey. Stakeholder perspectives gathered are discussed in section 3.2 below.

Quantitative findings shown in section 3.2 are predominantly taken from the online survey, however the themes identified incorporate perspectives gathered through interviews and written submissions received. As mentioned above, the survey questions were designed to replicate and further test findings from the interviews with the broader stakeholder categories and groups, and the results were found to be aligned.

It should also be noted that stakeholder perspectives gathered through the survey should be interpreted within the context of the design and method of compiling the survey, as well as relatively small sample sizes for some stakeholder groups (for example CDS Coordinators). Stakeholder perspectives presented are furthermore not implied to be representative of a particular perspective or stakeholder group and are indicative only and are presented to demonstrate and outline perspectives of stakeholder groups engaged.

3.2 Stakeholder perspectives

3.2.1 Key insights

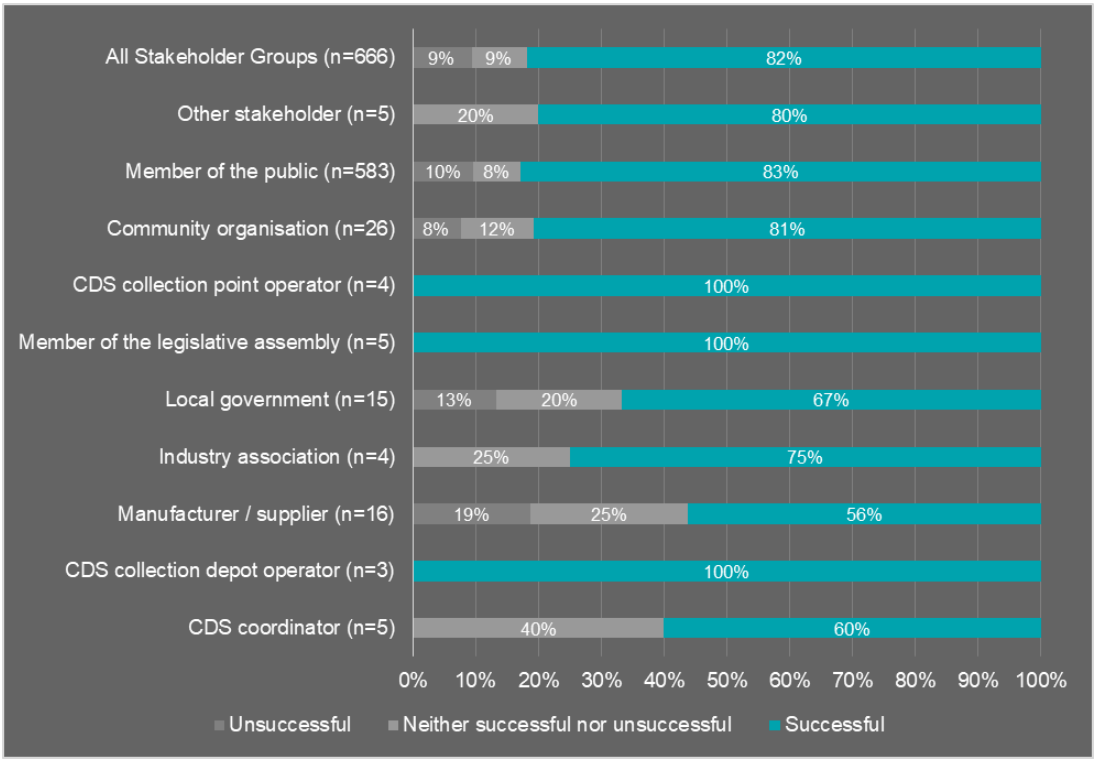
Key insights obtained through the stakeholder consultation include:

Success of the CDS

Overall 82% of respondents rated the CDS 'successful' or 'very successful', with only 9% selecting that it was 'not successful' and another 9% selecting 'neither successful nor unsuccessful' as shown in Figure 1. Of these stakeholder groups, 9 out of 16 Manufacturers/Suppliers, 3 out of 5 CDS Coordinators and 3 out of 3 Collection Depot Operators indicated the CDS was 'successful'. Stakeholders interviewed also indicated that the CDS was successful, noting that some opportunities for improvement remained.

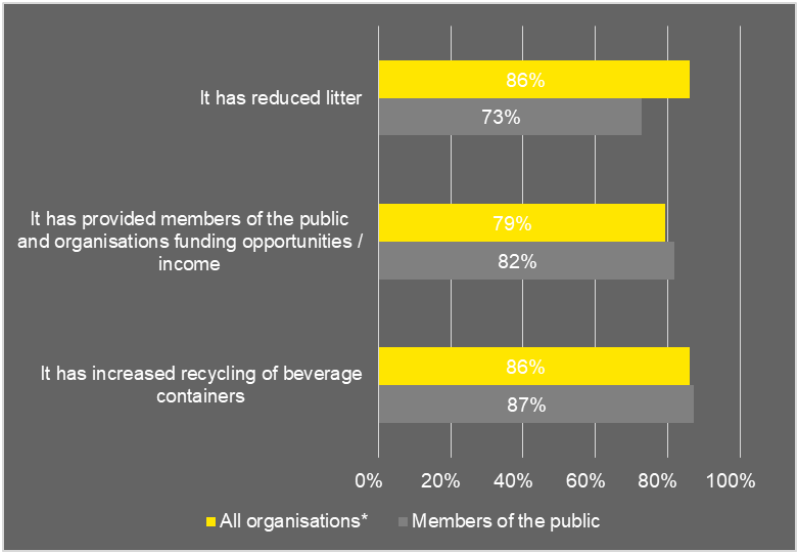
The main reasons as to why members of the public who participated in the survey thought that the CDS was successful included that the CDS has increased the recycling of beverage containers and also provided funding opportunities, as shown in Figure 2.

Figure 1: Success of the CDS by stakeholder type



* Note: The amount of stakeholders shown by *n* are the amount of stakeholders that responded to the question, and excludes those that did not answer the question or selected "don't know".

Figure 2: Stakeholder reasons as to why the CDS is successful



* Note: All organisations includes CDS Approval Holders, Community Organisations and Government Stakeholders.

Reasons for participating in the CDS[30]

81% of members of the public who participated in the survey indicated they participated in the CDS because they were environmentally conscious, 67% because of the 10c refund, and 26% to help community organisations raise money.

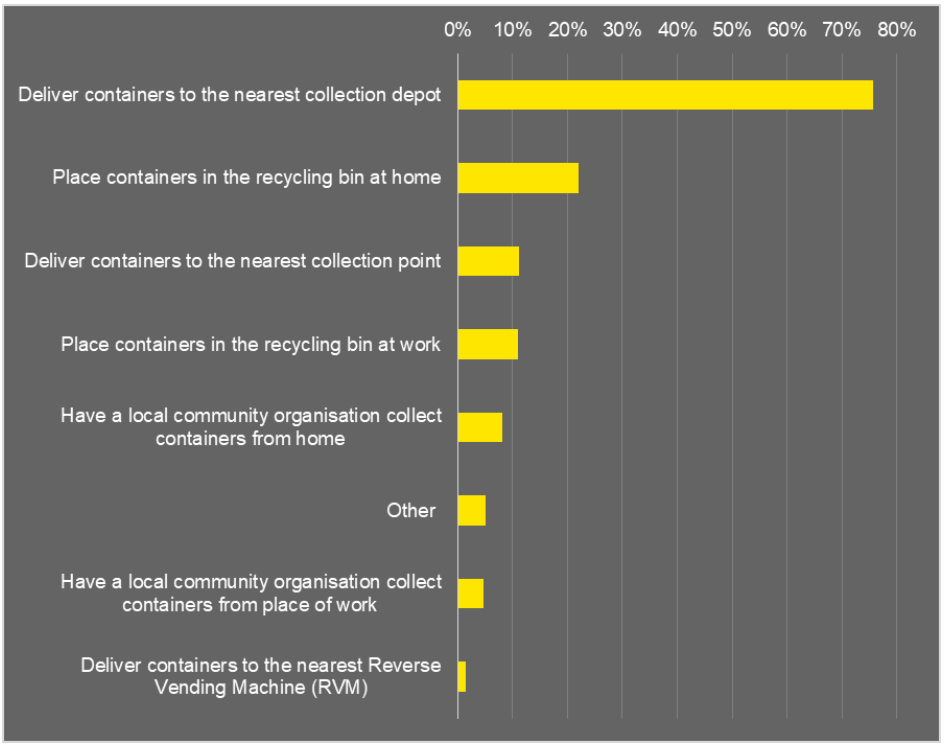
Method of participation in the CDS[31]

Figure 3 shows the preferred method used by members of the public who participated in the survey when asked how they deliver containers and participate in the CDS, with 76% indicating they delivered containers to collection depots, 22% indicating they placed containers in recycling bins, and 12% indicating they delivered containers to a collection point.

[30] Results total more than 100%, since survey respondents could select multiple answers.

[31] Results total more than 100%, since survey respondents could select multiple answers.

Figure 3: Methods utilised by members of the public to return containers



Barriers to participation in the CDS

Of the survey respondents, 46% said the largest barrier was due to some containers not being accepted as part of the CDS, and 25% said because they had poor knowledge/understanding of which containers could be redeemed. Similarly, for Community organisations (45%), CPOs (67%), Collection Depot Operators (67%) and Government stakeholders (75%), their largest barrier was also "Some beverage containers are not accepted as part of the scheme".

Community awareness

Less than half the survey respondents thought the general public was well informed about the CDS, and only 61% thought community organisations were well-informed.

Role of the NT EPA

The majority of opinions on the NT EPA's performance in delivering various outcomes and activities were 'don't know' or ambivalent, indicating that the NT EPA's role in the CDS was not well understood.

Containers for potential inclusion in the CDS

There was support across surveyed stakeholder groups for the addition of wine bottles and milk bottles to the scheme, but overall less support for take-away beverage containers. Of CDS Approval Holders, 56% indicated wine bottles and 47% indicated milk bottles could be added to the scheme. Of Government stakeholders, 85% indicated wine bottles and 75% indicated milk bottles could be added to the scheme.

3.2.2 CDS Approval Holders

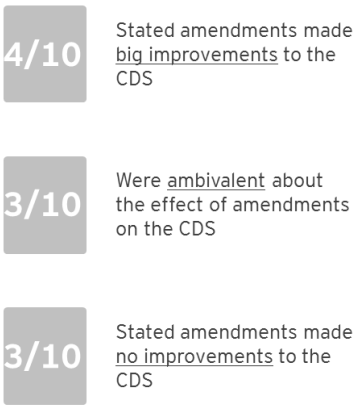
The views of CDS Approval Holders were important to identify what is working well, as well as opportunities for improvement from an operational perspective. CDS Approval Holders include beverage Manufacturers/Suppliers, CDS Coordinators and CDS Collection Depot Operators. Interviews (face-to-face and telephone) were held with all four CDS Coordinators and seven CDS Collection Depot Operators. Survey responses were received from a total of 34 CDS Approval Holders, including seven CDS Coordinators[32], three CDS Collection Depot Operators and 24 Manufacturers/Suppliers.

CDS Coordinators and Collection Depot Operators had mixed views with regards to the amendments made to the Act that entered into force in 2017.

CDS Collection Depot Operators indicated, in both surveys and interviews, that amendments to the Act have been positive and have improved the operation of the CDS, as shown in their response to the question with regards to the amendments to the Act in Figure 4. CDS Collection Depot Operators indicated that sorting beverage containers by material type, as opposed to beverage brand, was working particularly well and had improved operational efficiencies at depots, freeing up time and resources.

CDS Coordinators were less positive about the amendments to the scheme, citing in both the interviews and their responses to the survey that the amendments have resulted in more administrative duties for them.

Figure 4: CDS Coordinators and Collection Depot Operators attitudes to 2017 amendments to the Act



Collection Depot Operators were the most positive about the success of the scheme, with 3 out of 3 respondents rating the CDS as 'successful' or 'very successful'. Collection Depot Operators interviewed also indicated that the CDS was successful. The CDS Coordinators had a more mixed response. Whilst none of this group rated the scheme as 'unsuccessful', 2 of 7 respondents did not know and two rated the scheme neither successful nor unsuccessful, with similar views and responses received from CDS Coordinators interviewed.

Manufacturers and suppliers had the highest rate of dissatisfaction with the scheme (19%). Manufacturers/Suppliers noted that the CDS put additional costs, including administrative costs (such as costs associated with administrative processes of participating in the scheme including compiling applications for supply approval, entering into and negotiating Supplier Arrangements, reporting quarterly to CDS Coordinators the number of approved containers sold into the NT, etc.) and fees paid to CDS Coordinators (handling fees, etc.), into the business that they have to pass on to consumers. One noted that these additional costs made it too expensive to supply beverages to the NT.

[32] Note: the number of survey responses received for CDS Coordinators was greater than the number of approved CDS Coordinators, due to the ability of survey respondents to self-identify and more than one individual responding to the survey on behalf of the CDS Coordinator.

Other feedback from the CDS Approval Holders noted that the scheme created employment and business opportunities for family owned and run businesses and entrepreneurs.

> *"Provides employment and business opportunities" –* **Survey respondent (CDS Approval Holder)**

> *"Provides jobs" –* **Survey respondent (CDS Approval Holder)**

3.2.3 Community organisations

Community organisations provide members of the public access to the CDS by establishing and operating collection points. Of members of the public who participate in the CDS and participated in the survey, up to 24% rely on community organisations to deliver their containers to the CDS by either delivering them to the nearest collection point, or having community organisations collect containers directly from the participants home or place of work.

The CDS enjoys an approval rating of 81% among community organisations who responded to the survey, with only 8% saying that the scheme is not successful. Of those community organisations surveyed that indicated the CDS was successful, that main reason cited for the success of the CDS was due to the funding opportunities provided to community organisations.

An important co-benefit associated with the funding the CDS provides community organisations, are the employment opportunities generated as a result, including for the marginalised and those with disabilities, as reflected in the following comments received through the survey from community organisations:

> *"Generates entry level employment" –* **Survey respondent (Community organisation)**

> *"It has created employment for people with intellectual disabilities through the Social Enterprise Cash for Containers Project run by the Down Syndrome Association NT" –* **Survey respondent (Community organisation)**

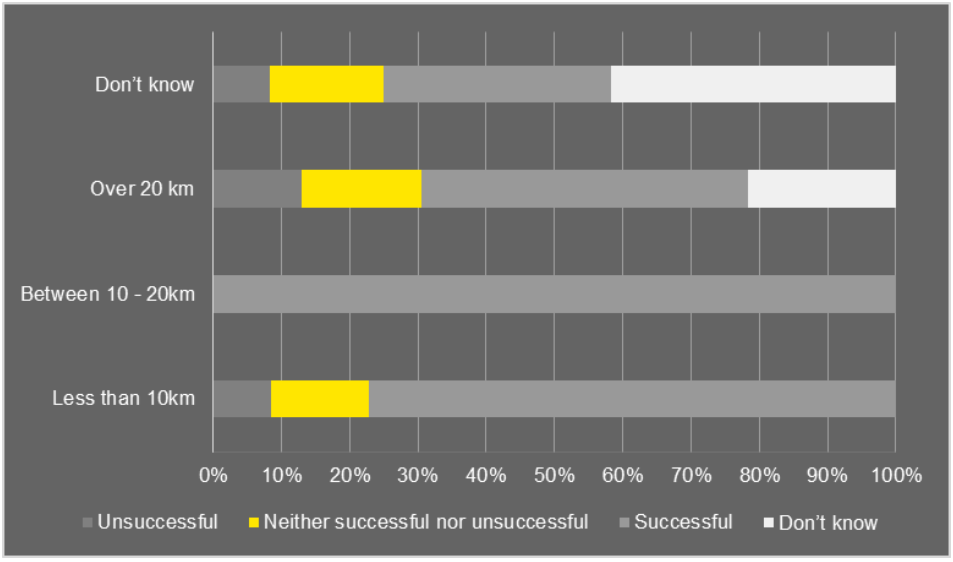
> *"The CDS has been instrumental in raising well needed funds for community groups and has reduced the dependency on some groups relying on at times difficult fundraising activities particularly in low socioeconomic areas. I am aware that schools, Volunteer Bushfire Brigades and progress associations have all benefited directly as a result of the CDS. Great source of revenue and a lot easier than sausage sizzles and ticket selling." –* **Survey respondent (Community organisation)**

3.2.4 Members of the public

The survey received 618 responses from members of the public. It was promoted on the DENR and the NT EPA's websites and Facebook pages, as well as advertised through paid advertisements in local newspapers (including the NT News, the Centralian, Katherine and Tennant Creek newspapers) and direct marketing by personnel of the DENR and the NT EPA and media releases put out by the DENR and the NT EPA.

Of the 618 public responses received, 83% of respondents rated the CDS 'successful' or 'very successful'. There was no correlation between the perception of success, and the distance that the respondent lived from the nearest collection depot or point (which acts as a proxy for convenience), as shown in Figure 5.

Figure 5: Success rating from members of the public by distance from collection depot or point



When asked to identify reasons why they thought the scheme has been successful, nearly three quarters of respondents noted that it had reduced litter and 87% of respondents cited a perceived increase in the recycling of beverage containers. There was also a perception that the CDS had reduced waste to landfill, increased awareness around recycling and been a good tool to engage and educate children around environmental sustainability.

> *"'Far better option than landfill." –*
> **Survey respondent (Member of the public)**

> *"'Reduced material to landfill." –*
> **Survey respondent (Member of the public)**

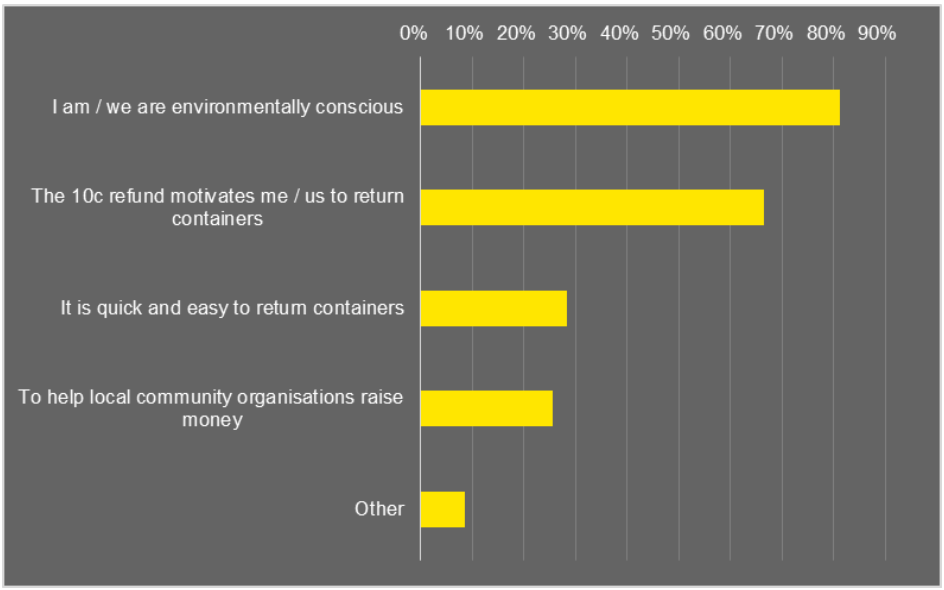
> *"It has helped educate children about recycling and encourage them to participate. Children are our future." –*
> **Survey respondent (Member of the public)**

> *"'Increased awareness about litter and recycling by the public. Engagement by the community in minimizing waste." –*
> **Survey respondent (Member of the public)**

> *"'Raises awareness of waste minimization." –*
> **Survey respondent (Member of the public)**

Results from an analysis of the drivers for participating in the CDS presented in Figure 6 show that over 80% of respondents participated because they are environmentally conscious, and two thirds did so because of 10c refund incentivised them to recycle.

Figure 6: Reasons selected by members of the public for participating in the CDS



The majority (76%) of respondents delivered containers to the nearest depot, while 22% used kerbside recycling, 10% delivered the containers to a collection point and 8% had a local community organisation collect containers from their home. Only 8 respondents (1%) had used the RVM located in Charles Darwin University.

In providing other comments about the scheme, members of the public who responded to the survey provided the following comments with regards to unclaimed/unredeemed refunds. These comments highlight the need for better access to accurate information about the scheme and how it works.

> *"Would like a system that collects 100% of the refund from industry, placed into a holding account to payout on refunds. The unclaimed portion to go enhance the CDS scheme and support tangible plastic bag and other waste clean-up initiatives"* – **Survey respondent (Member of the public)**

> *"'I don't believe that the public is adequately informed of the windfall that beverage suppliers receive from the deposit funds for all containers that are not returned to a depot for recycling. There is no accurate figure that I have seen stating the amount of unreturned containers and how this money is not returned to councils and governments who ultimately have the responsibility to clean up the mess. It instead goes into the pockets of soft drink companies and wine & spirit companies. This needs to be reversed so that the deposit funds are distributed to councils and shires to assist in the collection of our litter."* – **Survey respondent (Member of the public)**

> *"The limited scope of the scheme means that a deposit is paid on many, many bottles and never redeemed and those bottles are not recycled. I have heard on the grapevine that the drink manufacturers claim that as a 10c extra profit, but do not know of that is true. If it is true it is concerning. If it is not true, the fact that there is that perception is concerning."* – **Survey respondent (Member of the public)**

3.2.5 Government stakeholders

Views were also sought from Local Government representatives, and members of the NT Legislative Assembly. The survey received 20 responses from government stakeholders.

Three quarters of government stakeholders responding to the survey deemed the scheme to be a success, with only 10% noting that the scheme was unsuccessful. 80% of government stakeholders said that the scheme had reduced litter and increased recycling of beverage containers. The views of government stakeholders interviewed echoed views received from government stakeholders through the survey.

> *"[Local council] is having great success with the grants that we have received so far. The grants are helping our communities recycle the beverage containers and we are putting the funds that we receive from the container deposits back into each community in beautification programs. More assistance for remote communities is need to reduce waste and increase recycling. Thanks for the help so far."* – **Survey respondent (Local Authority)**

> *"CDS is of great community benefit and after some initial implementation issues has and will continue to gain community traction and acceptance."* – **Survey respondent (Government stakeholder)**

With regards to unclaimed/unredeemed refunds, government stakeholders indicated these could be used to enhance the operation of the scheme.

> *"I believe the income from the un-redeemed containers should be collected by either the EPA or other body and this income used to further enhance the scheme and assist in other litter and waste reduction strategies."* – **Survey respondent (Government stakeholder)**

3.2.6 Other stakeholders

Views were also received from other stakeholders including tourist facilities, retailers and NGOs. Of these stakeholders, 7 of 11 agreed that the scheme was successful, with 2 of 11 respondents noting that the scheme was neither successful nor unsuccessful and 2 of 11 respondents selected that they did not know. From interviews with participants in this category, the impression was the scheme was largely successful but needed some improvement. Other stakeholders also put forward comments with regards to unclaimed/unredeemed refunds.

> *"it has provided a platform to discuss further options of what is possible to achieve with waste reuse and recycling"* – **Survey respondent (Other)**

> *"I want to know what percent of total sales is being returned and what is happening to the gap (money) of containers not returned. The corporates ate [sic] pocketing these funds."* – **Survey respondent (Other)**

4. Findings and recommendations

4.1 Achievement of objective 3(a)(i)

Objective 3(a)(i) was taken to contain two goals, namely to:

- Reduce beverage container waste, and
- Provide communities throughout the whole of the Territory, as far as practicable, with access for the collection of empty containers and the payment of refund amounts

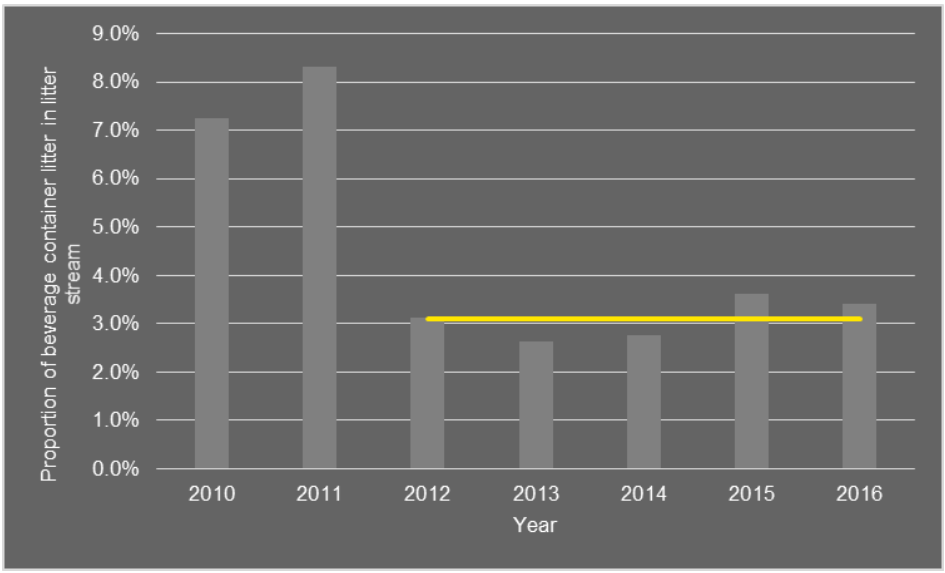
In considering whether the CDS is achieving the abovementioned objectives/goals, the evaluation analysed the barriers and challenges to achieving the objectives, and sought to identify opportunities and solutions to the barriers and challenges experienced.

4.1.1 Is the CDS reducing beverage container waste?

Keep Australia Beautiful's (KAB) National Litter Index (NLI) indicated that prior to the commencement of the CDS, the number of beverage containers (including both regulated and exempt containers) in the litter stream was decreasing, in line with a decreasing trend overall for all litter, as shown in Figure 7[33]. This means that the number of beverage containers in the litter stream does not provide an accurate indicator of the CDS's performance in regards to reducing beverage container waste. In order to determine the impact the CDS has had on beverage container litter, the proportion of regulated containers in the overall litter stream was utilised as an alternative indicator.

The proportion of regulated containers in the litter stream decreased from between 5-10% prior to the commencement of the CDS,[33] to 3.1% in the first year of the commencement of the CDS in 2012, with the proportion of regulated containers averaging 3.1% in the five years of operation of the CDS (see Figure 7). The CDS appears to have had a marked impact on the proportion of regulated containers in the litter stream.

Figure 7: Proportion of beverage container litter in the overall litter stream*



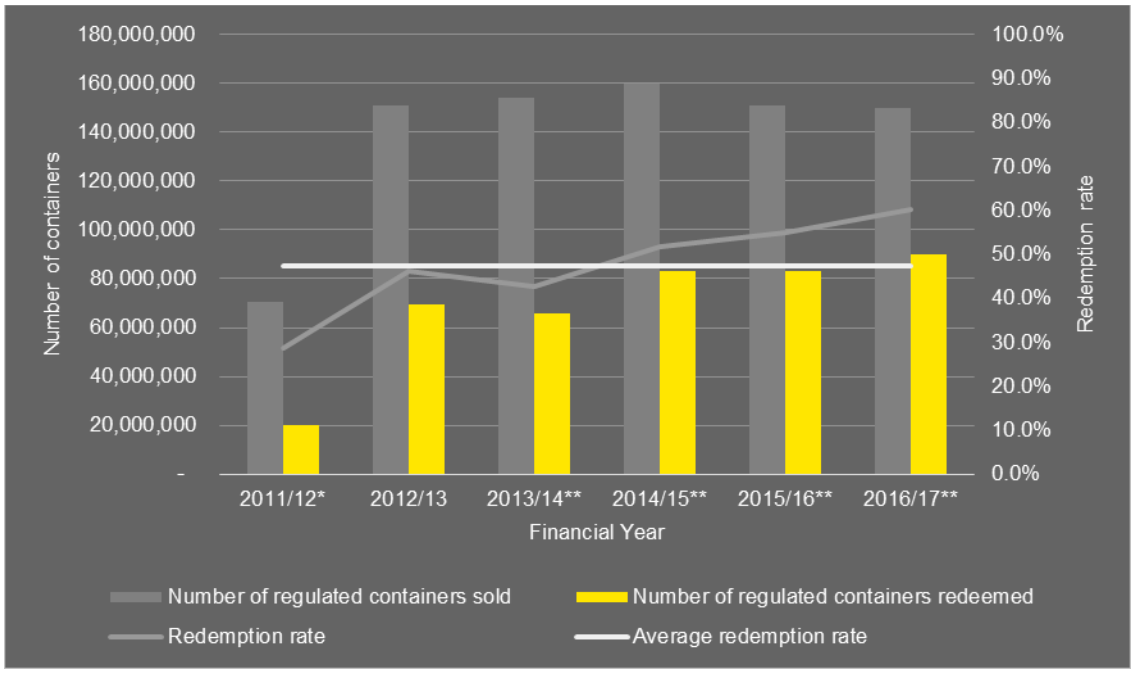
This is in line with the interview and survey findings, where stakeholders indicated that the CDS had, in their opinion, reduced beverage container litter (as discussed in section 3.2.1).

[33] Data sourced from KAB's NLI, as well as Rawtec, 2014, Review of containers regulated under the NT Container Deposit Scheme.

Another indicator utilised to determine the CDS's impact on beverage container waste is the number of redeemed containers and the CDS's redemption rate achieved. Redeemed containers are containers delivered to and accepted by collection depots for payment of the 10c refund. The redemption rate is defined as the number of redeemed containers expressed as a percentage against the number of containers sold into the Territory. The number of redeemed containers and the redemption rate are published in the *Environment Protection (Beverage Containers and Plastic Bags) Act* Annual Reports and these data have been utilised in this report. Redemption rates are reported based on financial year data.

To date the CDS has achieved an annual average redemption rate of 47.4%, showing an increasing trend from the first year of operation in 2012/13 where the redemption rate was 28.6%, to a peak redemption rate of 60.1% in 2016/17, as shown in Figure 8.

Figure 8: CDS annual redemption rate and trend



*Note: For financial year 2011/12, the Annual Report data covered the period from 3 January 2012 to 30 June 2012, since the CDS was only in operation for half of the financial year.

**Note: For the corresponding financial year, the Annual Report data for the number of containers redeemed was reported as "over" a certain amount, i.e. the actual amount was not reported.

While the CDS's redemption rate is below redemption rates for other schemes, which have typically achieved between 70 and 90%[34], the CDS's redemption rate needs to be interpreted within the context of the CDS's relatively short time in operation and the demographic and geographic features of the NT (relatively small and isolated population centres, and large size of the NT).\

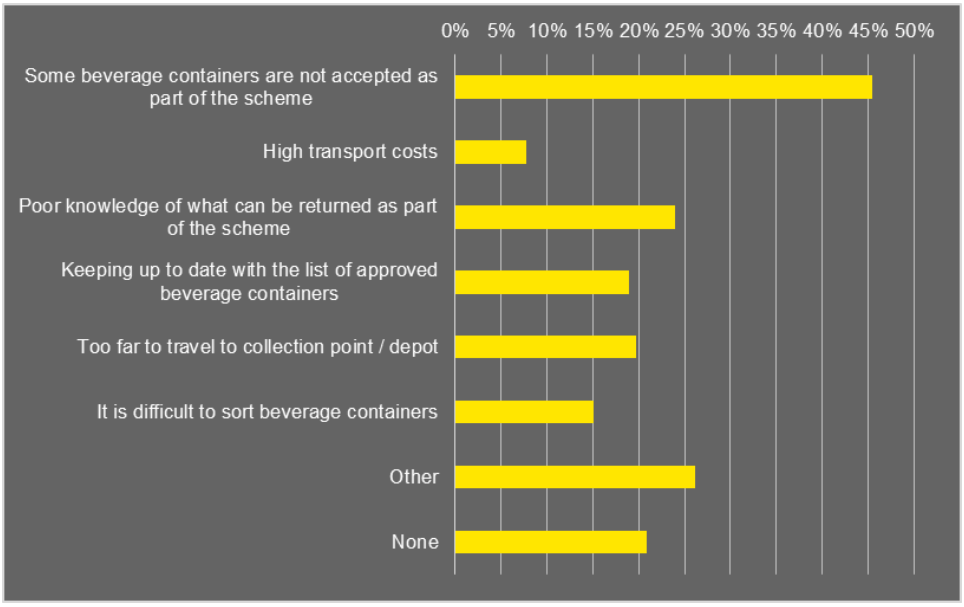
A number of barriers and challenges impacting the CDS's redemption rates identified and recommendations to address these are discussed in the following sections.

[34] For example, South Australia's "return rate" of 79.9% (for 2016/17), Norway's "return rate" of 95% (2014), California's "return rate" of 77%. Note - at times schemes referenced use "redemption rate" and "return rate" interchangeably. For the purposes of this report, the definitions of "redemption rate" and "return rate" as outlined in the Glossary of terms in Appendix A were applied to ensure that, as far as reasonably practicable, "return rates" reported by other schemes were "redemption rates" and thereby comparable to the NT CDS's redemption rate referenced. However, some inconsistencies may remain. Refer to the Glossary of terms in Appendix A for the definitions of redemption rate and return rate applied.

Container scope – Excluded beverages and exempt containers

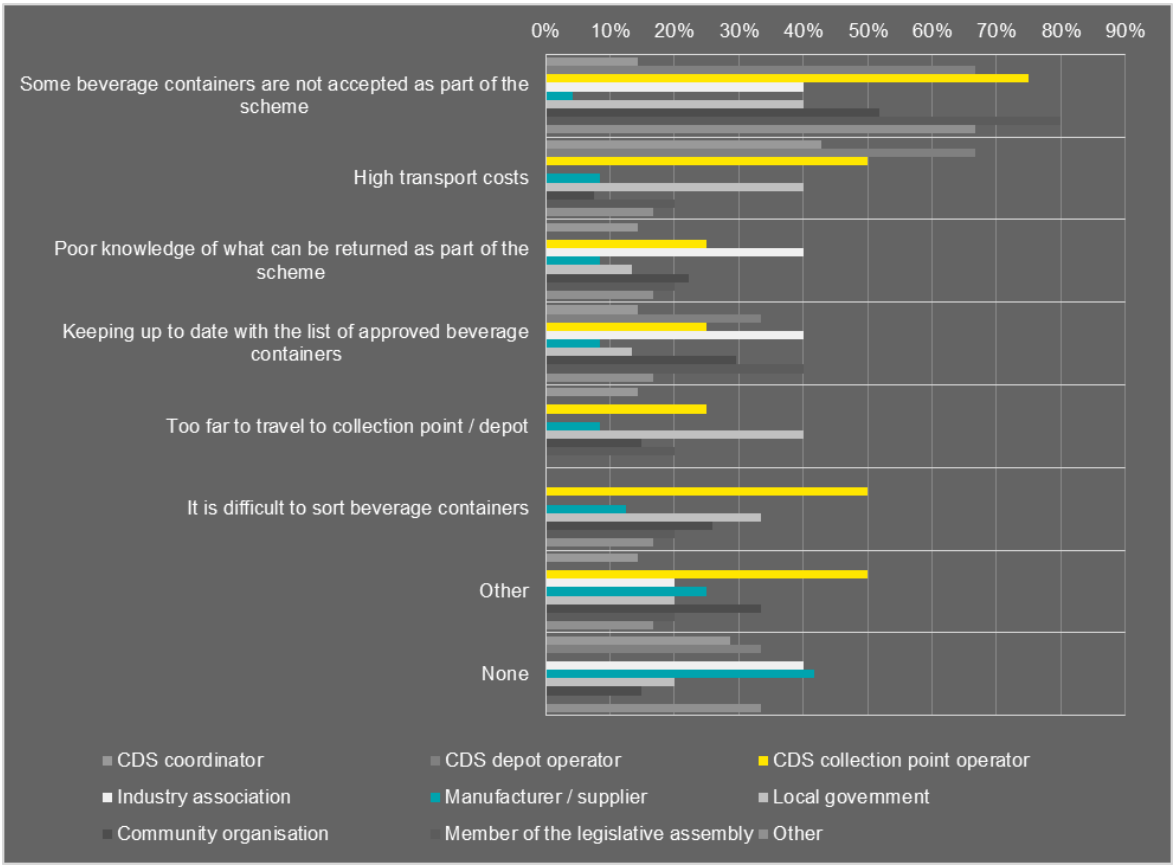
A key barrier identified was associated with the scope of beverage containers eligible for redemption under the CDS. As shown in Figure 9, members of the public who responded to the survey indicated that the largest barrier to their participation in the CDS was associated with limitations and complexity of scope and lack of knowledge of the types of beverage containers eligible for redemption under the CDS.

Figure 9: Barriers to stakeholder participation in the CDS identified by members of the public responding to the survey



For those stakeholders directly involved in the operation of the CDS, including CPOs and CDS Approval Holders, the survey results aligned with the general public. 75% of CPOs and 67% of Collection Depot Operators indicated that the largest barrier to stakeholder participation was the limitation on the types of containers that were eligible for redemption under the CDS, as shown in Figure 10. High transport costs were additionally identified as key barriers to participation by 67% of Collection Depot Operators, 50% of CPOs and 43% of CDS Coordinators.

Figure 10: Barriers to stakeholder participation in the CDS identified by stakeholders participating in the survey (excluding members of the public)



The exclusion of certain beverages from the CDS, while based on presence in the litter stream, can appear to consumers and members of the public to be arbitrary, leading to confusion over which containers can be delivered to the CDS for redemption. Simplification and consistency of containers included, focusing on type and material, would improve clarity for consumers and would support increased redemption rates.

Moreover, a number of beverage containers identified in the litter stream are excluded beverages, notably wine and spirit bottles as identified in KAB NLI data 2016. Stakeholders have identified support for the inclusion of wine and milk bottles into the CDS (see Figure 11 below).

The exclusion of certain beverages from the CDS, while based on presence in the litter stream, can appear to consumers and members of the public to be arbitrary, leading to confusion over which containers can be delivered to the CDS for redemption. Consistency of containers included, focusing on type and material, would improve clarity for consumers and would support increased redemption rates.

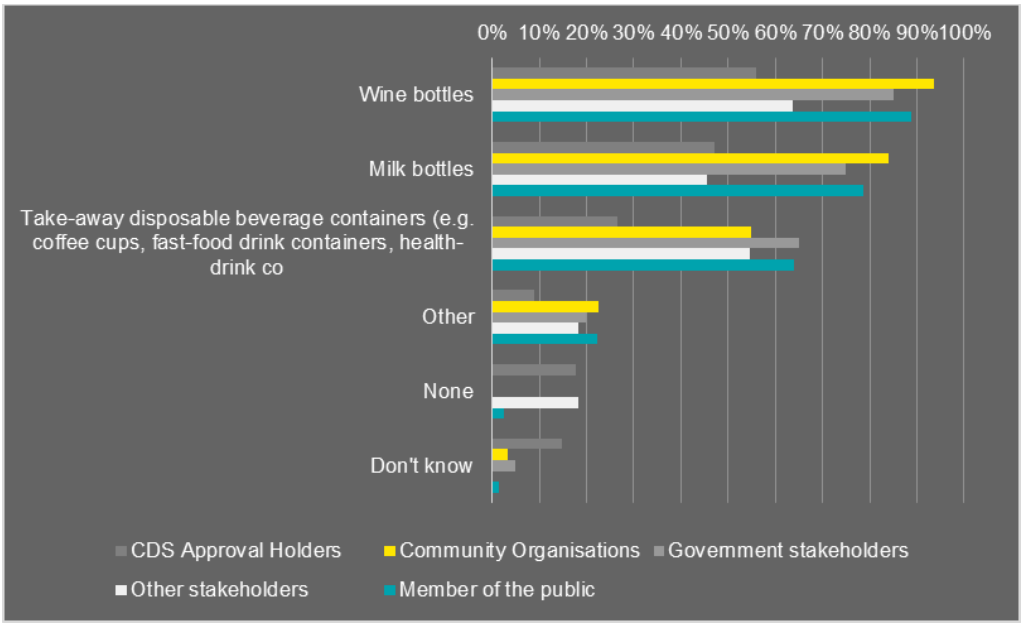
> *"'All containers should be part of the scheme and you should be able to return to point of supply." –* **Survey respondent (Member of the public)**

> *"'Inconsistent refunds between same type of product. e.g Coconut Water." –* **Survey respondent (Other)**

> *"'No major barriers but non acceptance of glass wine and spirit bottles would be a disincentive for picking them up if not for the ASTC 10cent program. Also disconcerting that plastic wine bottles are not returnable anywhere for 10cent." –* **Survey respondent (Other)**

There was support across surveyed stakeholder groups for the addition of wine bottles and milk bottles to the scheme, but overall less support for take-away beverage containers. Of CDS Approval Holders, 56% indicated wine bottles and 47% indicated milk bottles could be added to the scheme. Of Government stakeholders, 85% indicated wine bottles and 75% indicated milk bottles could be added to the scheme.

Figure 11: Beverage containers for potential inclusion in the CDS



Other containers for potential inclusion under the CDS included spirit bottles, plastic wine bottles, as well as container types already included in the scheme, but are excluded beverages, as reflected in the comments below.

> *"spirit bottles"; "cask wine bags"; "1 litre iced coffee, 1-2 litre juices"* – **Survey respondents (CDS Approval Holders)**

> *"All juice containers and ice coffee containers regardless of size - also spirits - also plastic, metal and glass food containers."* – **Survey respondent (Government stakeholder)**

> *"Glass and plastic cordial bottles, spirit bottles, glass bottles that do not have 10 cent on them."* – **Survey respondent (Member of the public)**

> *"Milk & juice cartons, cordial bottles, juice bottles."* – **Survey respondent (Member of the public)**

> *"Different size containers of the same type are not all in the scheme."* – **Survey respondent (Other stakeholder)**

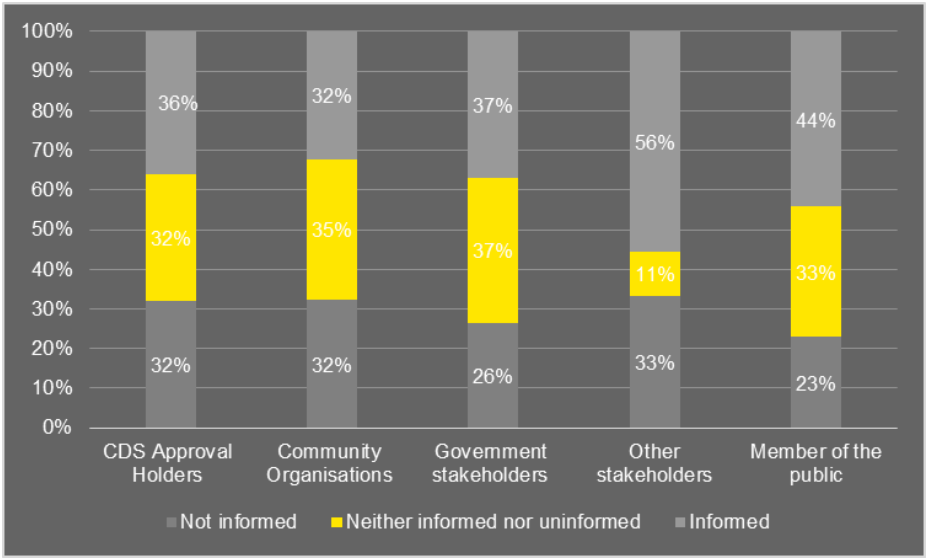
Recommendation 1: Consider the rationale and approach to excluding beverages and exempting containers from the scheme in order to ensure a well-defined, clear, and consistent container scope, which is aligned to all key objectives of the CDS.	**Priority:** High

Recommendation 2: Determine the feasibility of including additional containers as regulated containers and increasing the scope of containers regulated under the scheme, considering specifically wine/spirituous liquor containers and milk bottles as well as excluded beverages and exempt containers where a similar container is currently a regulated container. In determining the feasibility of including additional containers, consider also factors such as the recyclability of the container material and markets available for the recycled container material.	**Priority:** High

Community awareness and education

In addition to the barrier identified above of "poor knowledge of what can be returned", the perceived level of knowledge of members of the public and community groups identified in the survey was roughly evenly spread from "not informed", to "neither informed nor uninformed" and "informed", as shown in Figure 12. Whilst the scheme has been in operation for five years, this indicates that there was a lack of awareness as promotion of the CDS has decreased.

Figure 12: Level that community organisations and members of the public are well-informed about the CDS according to stakeholder groups



Recommendation 3: Increase focus on communication and awareness raising about the CDS, including providing accurate and up to date information on the types of containers regulated under the scheme.	**Priority:** Medium

Statutory declaration

Feedback from Collection Depot Operators indicated that the requirement to sign a statutory declaration for returning 1,500 containers or more was another barrier for participation. The purpose of the statutory declaration is to prevent containers being brought in from neighbouring States, however in practice this is not likely as it would not be economically feasible to transport containers from other states. Moreover, the risk associated with the cross-border transportation of containers will

significantly reduce once schemes are in operation in neighbouring States (expected within the next 12 months).

Recommendation 4: Remove the requirement for a statutory declaration to be signed for deposits of 1,500 containers or more.	**Priority:** High

4.1.2 Is the CDS providing communities throughout the whole of the Territory, as far as practicable, with access to facilities for the collection of empty containers and payment of refund amounts?

There is significant opportunity for improvement in meeting this objective. Many stakeholders reported a lack of access to collection facilities, in particular in remote communities due primarily to issues associated with the ability to ensure the ongoing operation of collection points in remote communities.

NT EPA's role in the CDS

Since the inception of the CDS, the NT EPA has played a largely administrative role in the scheme, including administrating the approval of containers, coordinators, depots, etc. However, the NT EPA's intended role, noting the design of the scheme as a predominantly industry operated scheme, was to provide regulatory, compliance and enforcement oversight.

Due to a number of factors, including the administrative burden of administering CDS approvals, and resource constraints, the NT EPA has had limited capacity to improve the performance of the CDS and provide strategic management and oversight of the CDS. Shifting the focus of the NT EPA to oversight will allow it to focus on the performance of the scheme through enhanced community awareness and education, as well as facilitating better coordination and cooperation between key stakeholders to increase participation in the CDS, specifically in remote communities.

Recommendation 5: Shift the focus of the NT EPA from a clerical administrative role, to an advocacy, compliance and audit function, in order for the NT EPA to play a more strategic management and oversight role in the CDS. Assess the NT EPA's resource allocation (both financial, human and technological) to determine additional resource requirements in order to support the desired function and role in the CDS.	**Priority:** High

Access to collection facilities

Respondents noted that there was a lack of facilities to deliver containers to in metropolitan areas, indicating that convenient publicly accessible collection facilities in areas of high foot traffic, such as retail precincts, were not available at present. 20% of members of the public that responded to the survey also noted that it was too far to travel to the nearest collection facility and that many collection depots were not convenient as during the weekend they are only open for a limited time, leading to busy periods on weekends. Comments from members of the public and CDS Approval Holders provided in the survey demonstrate how the lack of access to convenient collection facilities negatively impacts the likelihood of delivering containers.

> *"The line-up can be quite long at collection depots so sometimes I don't bother." –*
> **Survey respondent (Member of the public)**

> *"'From a consumer perspective, we hear that people value lifestyle and leisure time far more than taking time to return containers to a collection point in the NT." –*
> **Survey respondent (CDS Approval Holder)**

A more strategic approach to the location and use of RVMs may provide additional and convenient access to the CDS, such as placement at retail locations (for example car parks of supermarkets or petrol stations) for convenient access.

Currently, in order for retailers to place RVMs at retail precincts or retail outlets, retailers are required to obtain a collection approval, or, alternatively, enter into an agreement with a collection approval holder to place the RVM. Only two examples were identified where retailers had entered into an agreement with a collection approval holder to place a RVM at their retail outlet/precinct. While these RVMs are no longer in operation for various reasons, these examples demonstrate the potential for providing better access to collection facilities in areas of high foot traffic.

Retailers are also able to establish a collection point without requiring approval, however no collection points at retail outlets or precincts were identified.

Recommendation 6: Work with CDS Coordinators, Collection Depot Operators and retailers to promote the establishment of RVMs at retail outlets and precincts and other areas of high public foot traffic. Retailers could also be encouraged to set up collection points in partnership with a community organisation/charity and all proceeds donated to that community organisation/charity.	**Priority:** High

Recommendation 7: Provide better information to the public on options available to deliver containers to CDS facilities on the NT EPA website and social media platforms. This may include an interactive map of collection depots and collection points and information on community organisations that collect from home or the workplace.	**Priority:** Medium

It was also found that two collection depots in the Darwin metropolitan area were located in close proximity to each other. Co-locating collection depots in such close proximity to each other should only be considered where demand allows, and there is a clear need to increase convenience for those delivering containers.

Recommendation 8: Develop and implement clear guidelines for the establishment of collection depots that include considerations for the geographic location of collection depots and an analysis of potential demand.	**Priority:** Medium

Remote community access to collection facilities

Collection points are the primary means for remote communities to access collection facilities and participate in the CDS. Collection points are typically established and operated by community organisations, so because the NT EPA does not maintain a database of active collection points or CPOs, the number of active collection points is not known and their availability is not well promoted. Therefore the current level of access to collection facilities in remote areas is difficult to identify, but is anecdotally low.

Recommendation 9: Promote the establishment of collection points, in particular in remote communities, and investigate the establishment of a database of collection points.	**Priority:** High

Stakeholders noted that collection points in remote communities were susceptible to “key-person risk”, where ongoing participation and promotion of the CDS in the community are reliant on a person or organisation within the community and their ongoing efforts. A key recommendation is therefore for

the NT EPA to actively engage and provide ongoing support to key-persons in remote communities to ensure the sustainable operation of collection points in remote communities.

Recommendation 10: Identify, engage and support "key-persons" (individuals or organisations) in remote communities to promote establishment of collection points and the on-going participation in the CDS in remote communities. Facilitate access to training and support to the individual or organisation to engage with the community to expand the awareness and participation in the CDS. Work with these key persons to determine equipment and infrastructure that will support the efficient and effective operation of collection points in remote communities (for example, equipment such as balers and compactors which significantly improve transport efficiencies)	**Priority:** High

Access to funds for community organisations to establish and operate collection points was identified as a barrier. While CDS infrastructure grants are available from the NT EPA, there was little awareness of the CDS infrastructure grants available, with 79% of community organisations agreeing that the grants were not well publicised. Moreover, the use of additional equipment such as balers and compactors improves the feasibility and economics of transporting containers from remote communities to collection depots.

Recommendation 11: Facilitate better access to CDS infrastructure grants and provide on-going support to grant recipients to facilitate ongoing sustainable operation of collection points operated by grant recipients.	**Priority:** High

Among Collection Depot Operators, 67% cited high transport costs as the major barrier to accessing the CDS. However, the evaluation identified instances where a coordinated effort between various stakeholders, including CDS approval holders, local community members and transport companies, achieved access to the CDS for remote communities. For example, this included the "back-loading" of trucks and barges to return containers from remote communities to collection depots.

Recommendation 12: Work with key stakeholders and facilitate strategic partnerships to extend access to the CDS in remote communities (for example, through the use of back-loading provided by logistics companies).	**Priority:** High

4.2 Achievement of objective 3(a)(ii)

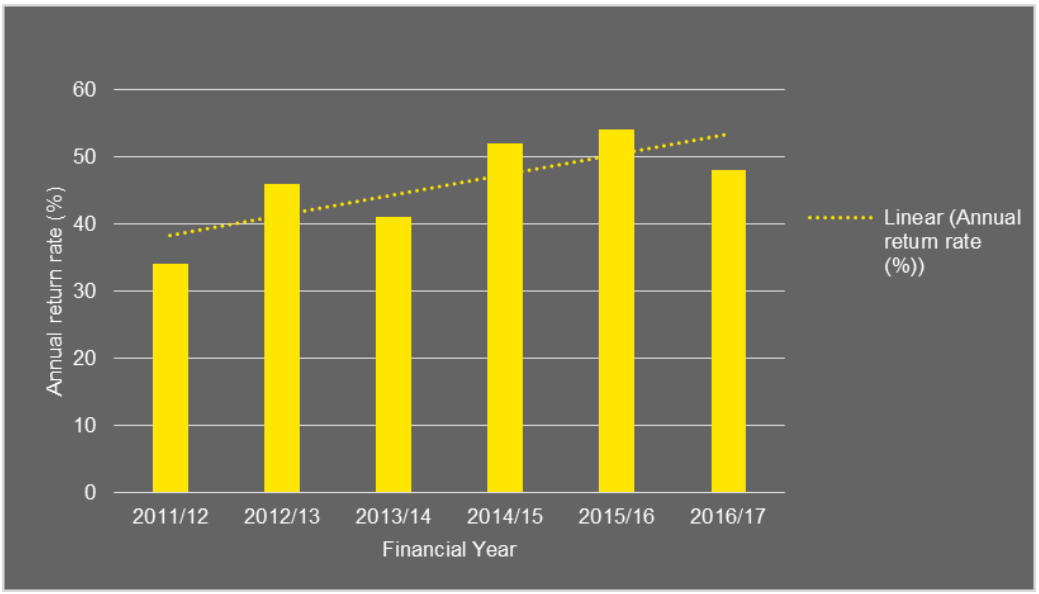
4.2.1 Is the CDS increasing resource recovery, reuse and recycling?

A key indicator utilised to determine whether the CDS was increasing resource recovery, reuse and recycling is the annual return rate achieved. The return rate is defined as the number of approved containers that have been aggregated by collection depots and returned to CDS Coordinators for reuse, recycling or appropriate disposal. The annual return rate achieved by the scheme is published in the *Environment Protection (Beverage Containers and Plastic Bags) Act* Annual Reports.

To date the CDS has achieved an annual average return rate of 46%, and has shown an upwards trend in annual return rates achieved, as shown in Figure 13. The return rate achieved to date indicated that the CDS was achieving objective 3(a)(ii) and increasing resource recovery, reuse and recycling.

However, due to inconsistent data collation and reporting on whether returned containers were reused or recycled (as proxies for resource recovery) or otherwise appropriately disposed of, there was insufficient data to provide a definitive conclusion as to what extent the CDS was increasing resource recovery.

Figure 13: CDS annual average return rate and trend



CDS Coordinator role in the CDS

CDS Coordinators have primary responsibility for the implementation and operation of the scheme. This responsibility can be taken to include the performance and promotion of the scheme. Section 49 of the Act states that the "Minister or NT EPA may establish targets for reuse, recycling or other disposal of approved containers". The targets can apply to all CDS participants, or to particular classes of CDS participants, or to holders of a particular class of CDS approvals. The NT EPA should set targets for resource recovery/ return rates for CDS Coordinators, since Coordinators are the main CDS approval holder responsible for the implementation and operation of the scheme.

In setting the targets, the NT EPA should work with Coordinators to identify achievable and realistic targets that aim to improve the performance of the scheme over time and increase return rates. The targets can be included as a condition of the Coordinator approval.

Recommendation 13: Set resource recovery/return rate targets for CDS Coordinators as allowed for under section 49 of the Act.	**Priority:** High

Returned container destination / end use

A lack of information on the end use of containers, and whether containers were in fact being reused or recycled was identified by survey respondents. Stakeholder feedback suggests that the lack of clarity about the final destination of recycled materials, may prevent people from participating in the scheme, if they think that the recycled materials will go to landfill regardless.

> *"More information about the end of line use of the recycled products is needed. For people who are environmentally motivated we need to know where the glass and aluminium is being transported and processed and the end use products. There needs to be a considerably increased effort to promote the scheme and how it operates including practical advice about sorting requirements." –*
> **Survey respondent (Member of the public)**

Recommendation 14: Establish a requirement for the improved reporting of the reuse and recycling of containers. Ensure the monitoring and reporting of the reuse and recycling of containers is sufficiently robust to ensure its accuracy and reliability. Consider undertaking an audit of the recycling and reuse supply chain to verify accuracy of data and provide clarity for stakeholders on where these materials end up.	**Priority:** Medium

Market access for recyclable materials

With the recent import bans China has imposed on certain recyclable material, the DENR, the NT EPA and a number of stakeholders raised concern regarding the overall viability of the recycling industry and market. This poses a key strategic challenge to the overall success of the CDS. It is however recognised that to a large extent this is outside of the direct influence of the DENR and the NT EPA.

Recommendation 15: Explore and identify opportunities to promote circular economic activity and the domestic recycling of materials through the expansion and promotion of the domestic recycling industry and markets for recycled material. Engage and work with key stakeholders including Federal, State and Local government, as well as the private sector to determine a strategic approach to promoting circular economic activity.	**Priority:** Medium

4.3 Operational improvements

In addition to assessing whether the CDS was achieving its objectives, opportunities to improve the operation of the scheme were identified to ensure the CDS continues to meet its objectives under the Act.

4.3.1 Administration of CDS Approvals

NT EPA staff interviewed indicated that the CDS approval process (including for Waste Management Arrangements (WMAs) and Container Supply Approvals) was administratively burdensome. Issues related predominantly to a lack of understanding of the approval process and documentation required to obtain approvals, which required additional follow-up and information requests from applicants, leading to delays in the approval process and requiring additional time from NT EPA staff involved. In particular, the container approval process was highlighted as resource intensive and time-consuming.

Additionally, technology systems utilised by the NT EPA were inefficient requiring a number of manual steps to transfer data and information between technology systems. This view was shared by manufacturers and suppliers who faced difficulties in getting containers approved in a timely manner.

Recommendation 16: Develop a set of clear, step-by-step guidelines and FAQs for applicants describing the approval process and the required documentation.	**Priority:** Medium

Recommendation 17: Identify inefficiencies in the container approval process and implement appropriate changes to eliminate or reduce inefficiencies identified and streamline the process.	**Priority:** High
Recommendation 18: Consider the potential for a "once off" approval for Manufacturers/Suppliers, as opposed to the on-going approval of each beverage container a Manufacturer/Supplier supplies into the NT, and allow Manufacturers/Suppliers to "self-regulate". For example, when an "approved" Manufacturer/Supplier submits a container for approval, a declaration is signed stating that the container submitted for approval has met all the requirements for the container to be a regulated container under the CDS. The NT EPA can then audit (at an appropriate risk-based approach and frequency etc.) containers submitted under "self-regulation" to determine whether containers submitted do in fact meet the requirements of the CDS legislation.	**Priority:** High
Recommendation 19: Advocate the adoption of a coordinated approach and or mutual recognition of container approvals across participating states and territories in Australia. As more schemes are established (for example Queensland and Western Australia), which have similar if not identical container scope, it would be more efficient for a centralised system of approvals to be used. At a minimum, mutual recognition of approval in other states should be established.	**Priority:** Medium
Recommendation 20: Assess the technology systems utilised in the container approval process. Determine whether technology systems are fit for purpose and implement automation into the technology systems.	**Priority:** Medium

4.3.2 Funding arrangements

All container deposit schemes around the world, including Australia, have return rates below 100%, and therefore have some refunds that are never claimed. While there exist many nuances to the notion of unclaimed/unredeemed refunds, as identified in the review of best practices in section 2.2.3 above, a number of schemes do in fact utilise unclaimed/unredeemed refunds to fund the operational improvement of the scheme.

Recommendation 21: Investigate the potential for unclaimed refunds, either as a whole or in part, to flow through to the development of the CDS. For example a proportion of these funds could be used to fund to address the challenges facing remote communities (improved infrastructure, transport subsidies, support for 'key people'). This funding could also be made available to the CDS infrastructure grants to help improve upstream packaging sustainability outcomes or collection and sorting infrastructure.	**Priority:** Medium

5. Conclusion

The evaluation concluded that the CDS was achieving objective 3(a)(i) in reducing beverage container waste, as well as objective 3(a)(ii) in increasing resource recovery, reuse and recycling. There was a significant opportunity for improvement in meeting objective 3(a)(i) and providing communities throughout the whole of the Territory, as far as practicable, with access to facilities for the collection of empty containers and payment of refund amounts.

A number of barriers and challenges around community awareness, accessibility, governance and administration have been identified that are preventing the CDS from further improving its performance. The recommendations made in this report are intended to address the barriers and challenges identified, and in turn support the operational improvement of the CDS.

A key recommendation underpinning the successful implementation of other recommendations made here, is the ability to shift the focus of the NT EPA to provide regulatory, compliance and enforcement oversight of the CDS. This will allow the NT EPA to also play a strategic role in the CDS, and focus on the performance of the scheme through enhanced community awareness and education, as well as facilitating better coordination and cooperation between key stakeholders to increase participation in the CDS, specifically in remote communities.

An initial priority rating has been assigned to each recommendation based on the recommendation's impact in overcoming the barriers and challenges identified, and improving the CDS's performance. The successful implementation of the recommendations, however, requires a considered approach. A number of factors, including the feasibility, mechanism (procedural, legislative, etc.) and resource requirements (financial, human and technological) of the recommendation need to be taken into account.

Furthermore, any recommendations considered for implementation as a result of this evaluation should consider the potential for a National scheme and seek aligned with other State container deposit schemes.

Appendix A Glossary of terms

The terms and definitions provided below are as per the *Environment Protection (Beverage Containers and Plastic Bags) Act* and the *Environmental Protection (Beverage Containers and Plastic Bags) Regulations*. Where inconsistencies are identified, refer to the definition applied in the Act and Regulations.

Term	Definition
Approved beverage container/ Approved container	A regulated container for which a supply approval is in place and a container that bears the approved refund marking.
Beverage	A liquid intended for human consumption by drinking.
Beverage container/ Container	A container that is made to contain a beverage.
Beverage container material type/ Container material type	The type of material from which the container is manufactured, including, for example, plastic, aluminium, glass and liquid paper board.
Container Deposit Scheme	The Northern Territory's Container Deposit Scheme ('NT CDS', 'CDS' or 'the scheme').
CDS approval	CDS approval means: (a) a collection approval, or (b) a coordinator approval, or (c) a supply approval
CDS Approval Holder/ CDS Participant	Means each of the following: (a) a CDS coordinator or operator of a collection depot (Collection Depot Operator) (b) a manufacturer, supplier (distributor) of regulated containers (c) others carrying out activities relating to the collection, reuse, recycling or other appropriate disposal of regulated containers
Collection depot	A facility or premises for the collection and handling of regulated containers delivered to the facility or premises in consideration of the payment of refund amounts for containers, and includes: (a) a reverse vending machine, and (b) another facility or premises of a kind prescribed by regulation
Collection Depot Operator	The operator of a collection depot, the entity carrying out the functions of the depot.
CDS Coordinator	(a) a person who, whether personally or through an agent: (i) coordinates the activities of CDS participants under the CDS, and (ii) collects, handles and delivers for reuse, recycling or other appropriate disposal, regulated containers received from collection depots
Container scope	The types of beverages and containers covered by the CDS, beverages and containers that require approval.
Coordinator arrangement	A waste management arrangement made between CDS Coordinators.

Term	Definition
Excluded beverage	Liquids determined to not be a beverage, specifically: (a) concentrated fruit or vegetable juice, or a mixture of concentrated fruit and vegetable juices, intended to be diluted before consumption (b) a health tonic (c) cordial Refer to the regulated containers fact sheet for additional information on excluded beverages[35].
Exempted containers	Containers to which the CDS does not apply, including the following: (a) glass containers used for containing wine or spirituous liquor (b) containers used for containing milk (other than flavoured milk) (c) containers used for containing 1 L or more of flavoured milk (d) containers used for containing 1 L or more of pure juice (comprising at least 90% fruit or vegetable juice or a mixture of fruit and vegetable juices) (e) containers used for containing more than 3 L of beverage (f) containers made of cardboard and plastic, cardboard and foil or cardboard, plastic and foil (commonly known as casks or aseptic packs) used for containing 1 L or more of wine, wine based beverage or water (including mineral water and spring water) (g) containers made of plastic or foil or plastic and foil (commonly known as sachets) used for containing 250 ml or more of wine Refer to the regulated containers fact sheet for additional information on exempted containers[36].
Manufacturer	A person who fills containers, or imports containers, for sale in the Territory.
NT EPA	The Northern Territory Environment Protection Authority established by section 6 of the Northern Territory Environment Protection Authority Act.
Operator arrangement	A waste management arrangement made between an operator of an approved collection depot and a CDS coordinator.
Redeemed container	A regulated container delivered to and accepted by a collection depot for payment of the 10c refund.
Redemption	The process of delivering regulated containers to collections depots for payment of the 10c refund.
Redemption rate	The number of redeemed containers expressed as a percentage against the number of regulated containers sold into the Territory.
Refund amount	The refund amount for an approved container, means the amount prescribed in Part 1A 2C of the Environmental Protection (Beverage Containers and Plastic Bags) Regulations. This amount is $0.10.
Regulated container	A container to which the CDS applies.
Returned container	A container returned by a Collection Depot Operator to a CDS Coordinator for the container to be reused, recycled or otherwise appropriate disposed of.

[35] North Territory Environmental Protection Authority, *Regulated Containers Fact Sheet*, Viewed 17 July 2018 https://www.actcds.com.au/pdf/ACT_Container_Deposit_Scheme_FAQs.pdf

[36] North Territory Environmental Protection Authority, *Regulated Containers Fact Sheet*, Viewed 17 July 2018 https://www.actcds.com.au/pdf/ACT_Container_Deposit_Scheme_FAQs.pdf

Term	Definition
Return rate	The number of approved containers that have been aggregated by collection depots and returned to CDS Coordinators for reuse, recycling or appropriate disposal, expressed as a percentage against the number of regulated containers sold into the Territory.
Reverse vending machine (RVM)	A device that: (a) accepts empty approved containers by scanning the barcode on the containers or in another way recognises containers as approved containers, and (b) dispenses the refund amount for the containers placed in the device
Supplier	A CDS participant who holds a supply approval.
Supplier arrangement	A waste management arrangement made between a supplier and a CDS coordinator.
Waste management arrangement (WMA)	A written arrangement/contract that is made between two or more CDS Approval Holders/CDS Participants to deal with, among others: (a) the collection, aggregation and transportation of containers the reuse, recycling or other appropriate disposal of containers funding arrangements and the payment of funds between CDS Approval Holders/CDS Participants

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