

Keeping It Clean – Changing Disposal Behaviour (2003)

Themes

Education, Change Management and Evaluation; Public Place Behaviour – Resource Recovery and Litter Prevention.

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Introduction

Reducing waste going to landfill, recovering resources through recycling, preventing litter entering stormwater systems, and keeping public places clean have long been goals of initiatives aimed at sustainable public places. There have been numerous programs to reduce litter and recover resources including national education programs, state-wide enforcement programs, and volunteer based programs. Such programs – some well resourced and quite elaborate, some conducted on a shoestring - have all typically operated with high levels of enthusiasm.

Many of these interventions though, have lacked strong conceptual or evaluative foundations. This has meant that the particular successes and limitations of programs may not have been well identified, limiting the extent to which:

- Programs with positive outcomes can be confidently replicated
- Programs with positive potential could be further adapted and tested
- Program elements which do not appear to work (or in fact make things worse) could be eliminated

Indeed as Cope (1995) [1] commented:

“...After some number of simple demonstration projects, we assume someone else will come along to apply what we have learned and proceed on to the next type of problem requiring entry-level demonstration. Even though there is a foundation on which to build, the second generation of research is often faced with the hardest challenge...”. p119.

This situation has resulted in a somewhat piecemeal approach to litter prevention, despite the strong commitment demonstrated by most agencies and community members to work towards a sustainable solution.

In order to establish a systematic understanding of the impact of various factors on littering and binning behaviour, since 1995, Community Change has undertaken a series of littering behaviour studies [2, 3, 4, 5, 6] in relation to disposing of used items in public places. As a result, following this seven year period of observational research on people's *actual* disposal behaviour in public places and at special events, Australian research currently leads the world in measurement of public place disposal behaviour. The Beverage Industry Environment Council has sponsored many

of these projects, including the annual monitoring of Australian littering and the creation of the world's largest database on disposal behaviour.

Central to these studies has been the use of the Observational Approach (OA) which directly records disposal behaviour *as it happens* in public places. Community Change has adapted the OA to provide objective assessment of change programs and identify best practice efforts in a broad range of environments. These include, for example, tourist resorts such as the Victorian Alpine Region and snow fields, special events like the Sydney Olympic Games, festivals where community members are actively encouraged to participate in recycling, and the development of stormwater (quality maintenance) education and management programs.

Based on this research, a range of practical measurement methods and educational applications have been designed to improve people's disposal behaviour in public places. Community Change has developed the *changing disposal behaviour* framework which includes:

- A. A set of universal principles for establishing sustainable public places and designing effective litter management and prevention programs
- B. A well validated systematic approach to the measurement and evaluation of program outcomes using the Observational Approach and the Disposal Behaviour Index
- C. A structured approach for local government and community agencies to use in analysing local features of situations to help set appropriate expectations for change – the Clean Communities Assessment Tool (CCAT)
- D. Educational resources based on understanding a community competencies approach to change.

These resources, described below, have been built on a solid information base to guide litter management and prevention, to predict likely disposal behaviour patterns in specific site types and to more effectively target management and recovery efforts.

A. Guiding Principles for Sustainable Public Places

Use of the Observational Approach to develop a more effective understanding of littering, binning and recycling behaviour has enabled the identification of a set of principles which, when included as part of litter prevention or resource recovery programs, maximize the potential for positive achievements.

Clean equals Clean

Prevention starts with clean

Clean environments lead to less littering and more binning. People in areas that are kept clean are less likely to litter.

Accessibility

Make it easy

No matter what the system, infrastructure or program, it needs to be accessible, convenient and user friendly. Accessibility will encourage use of facilities and positively influence disposal behaviour.

Responsibility

I'm responsible regardless

The same person can behave differently depending on the situation, site characteristics and other contextual factors. People can be encouraged to develop a sense of self responsibility leading to sustainable behaviour across environments.

Act on behaviour

Use sanctions and rewards

It is important to *respond* to people's actions, be they positive or negative. Sanctions and rewards play a central role in shaping, developing and changing disposal behaviour.

Consistency

Reduce confusion, create predictability

Ensure that all strategies and programs reinforce similar expectations in all situations. People in different situations need to know what is expected of them to be environmentally responsible.

Involvement

Aim to include everyone

Involvement can create a sense of ownership which impacts positively on disposal behaviour. Tailor initiatives to facilitate engagement and promote participation from as many people as possible.

Integration

Strive to fit it together

Strategies need to be linked and connected to all stakeholders across the system. Integration allows all strategies (including infrastructure) to work together to form an effective unit.

Demonstrate commitment Walk the talk

Leadership plays an instrumental role in influencing disposal behaviour, however that leadership needs to be sustained, promoting a long term vision and modelling the required actions.

B. Systematic Measurement and Evaluation of Behavioural Outcomes Using the Observational Approach

The Littering Behaviour Studies [2, 3, 4, 5, 6, 7], sponsored by the Beverage Industry Environment Council, have provided broad base monitoring of disposal behaviour throughout Australia using the Observational Approach, including comparison of the effectiveness of litter prevention programs in capital cities. Changes in disposal behaviour in various public places in cities are measured in relation to benchmarks first established in 1997 using the Disposal Behaviour Index (DBI).

The DBI provides an accurate measure of individual disposal behaviour incorporating both positive *and* negative actions, ie, littering, binning and recycling and is a statistical tool based on a very large sample size, currently around 80,000 observations. Widely recognised as an informative and robust tool it requires a high level of skill and resources to be successfully implemented. The higher the DBI level within a particular site, the more binning, recycling, composting occurring. The lower the DBI level, the greater the amount of littering is evident.

The research effort associated with the DBI is fairly resource intensive as it involves training data collectors in both detailed systems and ethnographic techniques. Such resources are frequently not available to those with an interest in objectively establishing littering behaviour in a particular area, or those using key performance indicators to assess local efforts at prevention and resource recovery.

To this end, Community Change has developed a modified observational method - Clean Communities Assessment Tool (CCAT) - to provide a more broadly available tool which can be used at the local level to capture the importance of the contextual factors and physical structures in litter assessments, and provide a basis for comparison across different locations.

C. A Tool for Local Government & Community Agencies - Clean Communities Assessment

The Clean Communities Assessment Tool (CCAT) has been designed for use by local councils, community groups and non-government agencies. It is a structured assessment strategy which provides an overall 'clean' rating for any given location using scores for situational features and groups of activities present in an area that impact on behaviour. The higher the CCAT score for a situation, the cleaner it is likely to be and the greater the likelihood it will remain clean.

The contributions of the various features and activities can be distilled from the total score, enabling comparison of changes in specific factors such as community disposal actions and knowledge about litter prevention campaigns.

The CCAT provides a systematic subjective rating of four core factors in the location under investigation, including:

- i. **Context** (sense of community and cleanness of the location)
The context rating scale identifies the foundations for building education and intervention programs.
- ii. **Facilities** (quality of infrastructure and BIN infrastructure)
The maintenance and provision of facilities in a location are rated because they have an impact on disposal behaviour.
- iii. **Knowledge and Attitudes** (opinions, knowledge and attitudes)
The awareness, knowledge and attitudes of community members about environmental issues provide a starting point for change programs as successful interventions build on demonstrated community competencies.
- iv. **Actions** (indications of disposal activities in area)
Observations of people's actual practices in a location provide a means for checking assumptions and self reports against actual actions and activities.

At a regional or local level, the CCAT can provide organisations with an accessible and consistent tool for measuring and evaluating disposal behaviour. The CCAT is particularly valuable for local councils who require data on current levels of disposal behaviour *before* implementing an intervention program. Post-program levels can then be reliably measured, enabling further program modification and improvement.

On this broader scale, the CCAT provides the foundation for state-wide measures and evaluation of disposal behaviour and in particular, littering. A consistent method for measuring littering can provide accurate data on the performance of litter prevention interventions, with data used to promote a systematic approach to prevention, building on successes and clearly identifying lessons.

D. Educational Resources - Changing Disposal Behaviour

The culmination of eight years of observational research into people's disposal behaviour in public places has led to the *Changing Disposal Behaviour Guide*, summarising key learning on changing disposal behaviour. The framework describes strategies for:

- Identifying real behaviour types
- Establishing motivations and barriers to change
- Universal principles for effecting change
- Systematic approaches to promoting sustainable behaviour
- Practices for preventing litter and recovering resources
- Basic steps in the change process

The *Changing Disposal Behaviour Guide* contains a variety of information, activities, photos and case examples on disposal behaviour which can be used to facilitate local intervention programs and educate stakeholders about the importance of intervening to change behaviour and measuring the impact and outcomes of their efforts.

Conclusion

Integrated litter management and prevention programs are likely to provide the most cost effective returns from limited resources. Community Change's research has involved the *actual behaviours* associated with littering and binning, with CC developing innovative ways to measure, understand and predict disposal behaviour. Their techniques have helped in more cost-effective use of resources through recycling systems in public places and at events. Community Change, like many stakeholders, is working towards a unified approach which encourages Australians to utilize world best practice.

As part of our commitment to sustainable practices, we are using a change framework to assist communities in directing their prevention efforts more effectively, with greater confidence in outcomes and a clear set of principles to guide intervention efforts, along with straightforward, systematic methods for monitoring and evaluating outcomes.

References

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