Resources, Conservation & Recycling 134 (2018) 174–183

Contents lists available at ScienceDirect

Resources, Conservation & Recycling

journal homepage: www.elsevier.com/locate/resconrec

Full length article

Integrating community perspectives into domestic food waste prevention and diversion policies

Addisalem Benyam[a,*], Susan Kinnear[b], John Rolfe[c]

[a] School of Business and Law, Central Queensland University Australia, Brisbane, Queensland 4000, Australia
[b] Research Division, Central Queensland University Australia, Rockhampton, Queensland 4702, Australia
[c] School of Business and Law, Central Queensland University Australia, Rockhampton, Queensland 4702, Australia

ARTICLE INFO

Keywords:
Domestic food waste
Behavioural changes
Householders
Focus group discussions
Preferences
Policy intervention

ABSTRACT

Food waste (FW) in Australia costs an estimated $8 to 10 billion per year, and is associated with detrimental environmental and socio-economic implications such as greenhouse gas emissions and loss of human and natural capital. Preventing domestic food waste (DFW) generation and/or redirecting these resources to recyclable outputs is an important policy issue, however effective policy must first begin with an understanding of behavioural drivers for DFW generation. To examine this issue, a case study was conducted in two local government areas in Australia. Using focus group discussions, consumers' understanding of and opinions about DFW generation, diversion and prevention options were assessed. Four hypothetical DFW policy options were explored: these included diversion options of home/backyard composting, community composting, and a residential FW collection program; and a prevention option, which was education programs to avoid over purchasing and over consumption. Home/backyard composting and education were the first and second preferred options, respectively. The sub-sample of residents were already practicing helpful food waste reduction habits, such as home composting and frugality in food spending and consumption habits. The findings demonstrate that understanding residents' views requires an exploration of the complex psychological, socio-economic, environmental, and regulatory factors that shape opinions and behaviours towards food utilisations. The research demonstrates the potential value in embedding community perspectives in policy instruments, with the aim of encouraging sustainable food consumption and utilisation behaviours in regional communities.

1. Introduction

Globally, roughly one third of food produced for human consumption never gets eaten (Food and Agriculture Organization (FAO), 2011). This is associated with the loss of large amounts of resources utilized for food production, processing (packaging), preservation, transportation, distribution, sales, consumption and disposal. Nearly USD 1 trillion in economic, 700 billion in environmental and 900 billion in social costs, together with 3.5 Gt CO2-e of greenhouse gas emissions per year are reported due to food wastage (Food and Agriculture Organization (FAO, 2014). From 2008 to 2009, close to 7.5 million tonnes of FW was generated in Australia (Mason et al., 2011). In 2004 alone, it was estimated that approximately $5.2 billion was spent nationally on food that was left unconsumed in Australia (Baker et al., 2009). Evidently, consumers (i.e., householders) are opposed to wasting food but ironically, everyone wastes some amount of food, habitually or unconsciously. The diversity of choices and humans' limited rationality in decision-making (Codagnone et al., 2014; Simon, 2000) have profound influences on householders' food wasting behaviours. However, the reliability of quantitative data used to estimate the magnitude of FW remains contested. FW-related studies of Australian and UK households have reported that available datasets and methodologies used to employ cost-effective FW mitigation options, are substantially inconsistent and insufficient—especially considering the diversities across food supply chains, scales and nature of DFW drivers (Parfitt et al., 2010; Reutter et al., 2017). Correspondingly, evidence from another Australian study is that the scale of informal DFW disposal paths (e.g., feeding to pets) is considerably overlooked and a sizable volume of disposal is not captured through the formal quantifications (Reynolds et al., 2014).

The composition, volume, and frequency of DFW generation differs from one source of generation to another (producers, wholesalers, retailers, processors and/or householders). This means choosing or designing applicable prevention approaches should be unique to each source of generation. For example, at the household level, different methods of addressing FW problems include, but are not limited

* Corresponding author.
E-mail addresses: a.benyam@cqu.edu.au, addisalem.benyam@cqumail.com (A. Benyam), s.kinnear@cqu.edu.au (S. Kinnear), j.rolfe@cqu.edu.au (J. Rolfe).

https://doi.org/10.1016/j.resconrec.2018.03.019
Received 15 January 2018; Received in revised form 19 March 2018; Accepted 19 March 2018
0921-3449/ © 2018 Elsevier B.V. All rights reserved.

to—composting, limiting purchasing habits, sustainable consumption habits, awareness education or campaigns, and food donations (Department of Environment (DoE), 2016; European Union Committee (EUC), 2014; Mondéjar-Jiménez et al., 2015; Stanley & Turner, 2010). Studies have also reported that DFW generation could largely be influenced by the environmental, technological, social, economic, and political factors surrounding householders' day to day activities (FUSIONS, 2014; Pearson et al., 2013; Waste and Resources Action Program [WRAP], 2015). It has been criticized also that the behaviour of consumers (householders) should not be considered as the single largest driver of DFW (Evans, 2011a; Stuart, 2009).

Government regulations related to food production, provisioning, accessibility, affordability, safety, and disposal also strongly affect DFW behaviours. For example, inconsistencies in some DFW related policies have been shown to contribute to undesirable food-related decisions, irrespective of preventative efforts (Baker et al., 2009; FUSIONS, 2014). Undoubtedly, success in DFW prevention policies or programs is heavily influenced by the extent of support given by the householder. Despite this, identifying and properly integrating the complex set of behavioural factors into policy making has been poorly examined. With local government's (LGs) traditional role of providing 'road, rates and rubbish' services', competing priorities and limited resources present restrictions on their capacity to provide effective environmental services (Pini et al., 2007; PricewaterhouseCoopers, 2006; Thomas, 2010).

When examining major drivers to prevent FW, one important initiative is the global target declared by the United Nations as one of its Sustainable Development Goals (SDG). Target 12.3 of SDG 12 stipulates "by 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses" (United Nations General Assembly, 2015). In Australia, FW costs the economy about $20 billion a year (Department of the Environment and Energy, 2017). In alignment with the SDG FW reduction target, Australia has recently released a national FW strategy that provides a framework for collective actions towards halving Australia's FW by 2030 (Commonwealth of Australia, 2017).

Diverse studies have also put different emphases on the impacts of DFW. However, knowledge gaps are evident for systematic investigation of DFW behaviours and how they could be translated into global, national and local food waste reduction efforts. To the knowledge of the authors, little work has been done to assess householders' policy preferences on DFW prevention and/or diversion programs in regional Australia. To address that knowledge gap, a case study was undertaken by conducting two focus group discussions (FGDs) with residents in the Rockhampton Regional Council (RRC) and Livingstone Shire Council (LSC) of the Central Queensland. Policy options to prevent and divert DFW were discussed to assess how householders' views on DFW attitudinal and behavioural issues can be understood. The focus groups also explored what productive and/or counter-productive behaviours regarding DFW could be dealt with by policy planning and implementation. Investigating the costs and economic viability of the policy options was not within the scope of this study, given its focus on identifying drivers and community attitudes.

2. Methodology

FGD is qualitative data collection method used to gather deep insights in a permissive atmosphere that allows participants to form thoughts and answer questions in their own words (Eliot & Associates, 2005; Krueger & Casey, 2002). FGD allows generation of a range of ideas, views, opinions and feelings about the topic of discussion by illuminating diverging perspectives (Rabiee, 2007). The FGD study was approved by the CQUniversity Human Research Ethics Committee (H16/09-264).

2.1. Case study area–participants' recruitment and FGD sessions

Currently, the state of Queensland does not have a food waste reduction policy. Nevertheless, food waste reduction has been identified as one of the priority waste reductions areas by the state government (Department of Environment and Heritage Protection [DEHP], 2014). The DEHP strategy proposes a range of targets including i) promote organic waste reduction initiatives amongst communities and businesses through sustainable consumption and purchasing decisions, organic waste (including food) diversion, and production of compost and energy from waste; ii) reduce landfilling by 15% over the next 10 years through the reuse and recovery of waste; and iii) achieve a 45% recycling rate for municipal solid (household) waste in regional areas by the year 2024. Local governments too can be critical agenda setters, acting as models for rapid and wide diffusion of local initiatives that can be emulated and scaled-up (Schreurs, 2008). In compliance with Queensland's 'Waste Reduction and Recycling Act 2011' and 'Queensland Waste Avoidance and Resource Productivity Strategy' (Department of Environment and Heritage Protection DEHP, 2014), both Councils have developed waste reduction and recycling plan (WRRP).

However, compared with large metropolitan areas, LGs in regional areas struggle with fewer options for waste reduction due to less readily available infrastructure and services. In Queensland, southeast Queensland has high population concentration, where large volume of waste generated by the cities present relatively better waste management options compared to the regions, which are mostly decentralized and sparsely populated. The lack of economies of scale makes it challenging for the regional LGs to have the necessary infrastructure to provide efficient waste services, and to do so cost effectively. On these accounts, this case study focussed on DFW issues in two local councils in Central Queensland region (northern Queensland)—Rockhampton Regional Council (RRC) and Livingstone Shire Council (LSC). Both councils are currently challenged by large production of food waste in which the residential stream plays a considerable part.

The target population for the focus groups was residents, 18 years of age or older who, at the time of the FGDs, were living in the RRC or LSC areas. CQUniversity's Population and Research Laboratory recruited the FGD participants using Computer Assisted Telephone Interview Laboratory, employing land-based Random-Digit Dial service. This ensured that all respondents had an equal chance of being contacted. Subsequently, the recruited participants were contacted by e-mail to confirm the date, time and location of the session. Both sessions were facilitated by the authors and notes were taken during the discussions with the prior consent of the participants.

A total of 17 participants were recruited, from a planned FGD sample size of N = 20. Disclosure of demographic information for age and income level was not mandatory in order to maintain the participants' privacy. Participants for the FDG were recruited on the basis that only adults 18 years and above can participate. However, most of the recruited participants were seniors (55+ years old) who were not in permanent full time employment. Details of the demographic and socioeconomic characteristics of the study area and the participants are provided in Table 1.

2.2. Design of the FGDs strategies

The design and choice of the discussion questions was informed by a comprehensive review and analysis of relevant literature, which is also an integral part of this research. The review assessed and analysed the behavioural influences of DFW in relation to the complex web of drivers, decisions and their implications.

A FGD schedule was used to conduct the sessions, in order to respond to the following research questions:

1 What are the preferred DFW prevention policy options that householders could choose from and participate in?

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
✓ امکان دانلود نسخه ترجمه شده مقالات
✓ پذیرش سفارش ترجمه تخصصی
✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
✓ دانلود فوری مقاله پس از پرداخت آنلاین
✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات