



UTS: INSTITUTE FOR SUSTAINABLE FUTURES

# LOVE FOOD HATE WASTE: FOOD FESTIVALS AND FARMERS MARKETS

Yamba 'Surfing the Coldstream' Festival Trial



**UTS:ISF**  
INSTITUTE FOR SUSTAINABLE FUTURES



DECEMBER  
2016

## ABOUT THE PROJECT

The **Love Food Hate Waste: Food Festivals and Farmers' Markets** project aims to reduce the amount of avoidable food waste currently being discarded at festivals and markets in NSW. The project set out to achieve this by first engaging organisers and stallholders of farmers markets to understand the opportunities and challenges to reducing avoidable food waste and producing a suite of education resources. These resources were then piloted at Pyrmont Festival, revised and trialled again at the Yamba 'Surfing the Coldstream' Festival.

The Yamba Festival Trial documented in this report (conducted Aug-Nov) follows an earlier Pyrmont Festival pilot (Apr-Jun) and background research at Farmers Markets (Feb-Apr). Results of the background research and pilot are available as separate reports.

## ABOUT THE AUTHORS

**The Institute for Sustainable Futures (ISF)** was established by the University of Technology, Sydney in 1996 to work with industry, government and the community to develop sustainable futures through research and consultancy. Our mission is to create change toward sustainable futures that protect and enhance the environment, human wellbeing and social equity. For further information visit: [www.isf.uts.edu.au](http://www.isf.uts.edu.au)

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## ACKNOWLEDGEMENTS

Thanks to our project partners:



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This project is supported by the Environmental Trust as part of the NSW Environment Protection Authority's Waste Less, Recycle More initiative, funded from the waste levy.



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# 1 INTRODUCTION

## ABOUT THE PROJECT

The **Food Waste at Festivals and Farmers’ Markets project** is a Love Food Hate Waste project targeting small food retail and food service businesses, with the aim of reducing the amount of avoidable food waste currently being discarded at farmers markets and food festivals in the City of Sydney and broader NSW.

Full of fresh and delicious food, farmers’ markets and food festivals are places where people interested in local and sustainable food gather. A unique aspect of these markets and festivals is that they connect food stallholders who represent the entire food life cycle chain (from production and processing to food retail and food service) to consumers.

This makes them a unique place to target food waste avoidance activities, where effects could reach all aspects of the food system and impact on all stages in the food lifecycle.

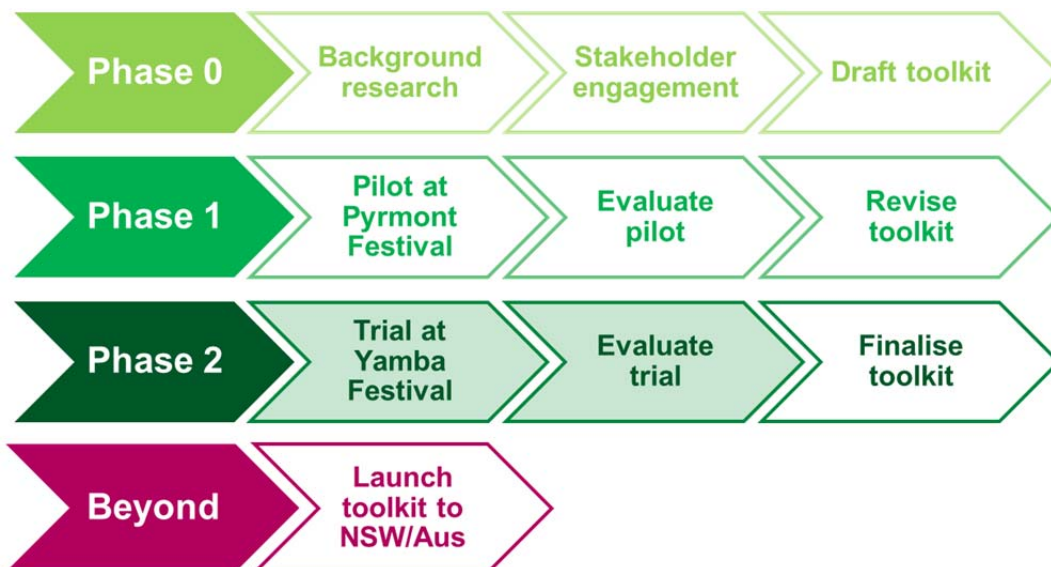
*Market/festival food stallholders are a specific subset of food retail and food service businesses*

*This project looks at food waste avoidance opportunities before, during and after markets and festivals, by both stallholders and consumers.*



	Pre-Market	At Market	Post-Market
Stallholders	✓	✓✓	✓
Consumers		✓✓	✓

The project has 3 phases. This report documents the results of the trial of *Food Stall Savers* at the 2016 Yamba ‘Surfing the Coldstream’ Festival.



## Project partners

The project is a joint initiative between the Total Environment Centre, Smart Locale and the Institute for Sustainable Futures (ISF) at the University of Technology Sydney. The project partnered with Pyrmont Ultimo Chamber of Commerce, Mudgee Wine and Yamba Coldstream festival to deliver the project.

The project is supported by the Environmental Trust as part of the NSW Environmental Protection Agency's Waste Less, Recycle More initiative, funded from the waste levy.



## ABOUT THE YAMBA TRIAL

Following this pilot, an online avoidable food waste toolkit resource was developed for festival and market organisers and food stallholders – The FoodStallSavers toolkit <http://foodstallsavers.org.au/>. This contained a 5 week implementation plan for organisers and tips for stallholders (across four categories of prepared food, perishable products, processed products and fresh produce) with an accompanying action plan.

The project team sought to trial the FoodStallSavers toolkit for the first time at a second festival in the Sydney region, however, in August 2016 project partner TEC received a message from a festival organiser in the NSW regional coastal town of Yamba who was interested in trialling the toolkit for an upcoming festival. This was considered to be an appropriate trial at a festival that was in a regional area, compared to the urban location of the Pyrmont Festival.

Therefore, the use of the online FoodStallSavers toolkit was trialled at the Yamba Coldstream Festival in October 2016, a free music and food community festival in Yamba. Participants in the trial included the festival resource recovery coordinator as the organiser and 16 'prepared food' stallholder businesses.

The trial sought to achieve two main goals:

- Explore how the online toolkit can stand alone as a resource and be used by event organisers without intensive support
- Make any required refinements to the toolkit in order for it to better standalone.



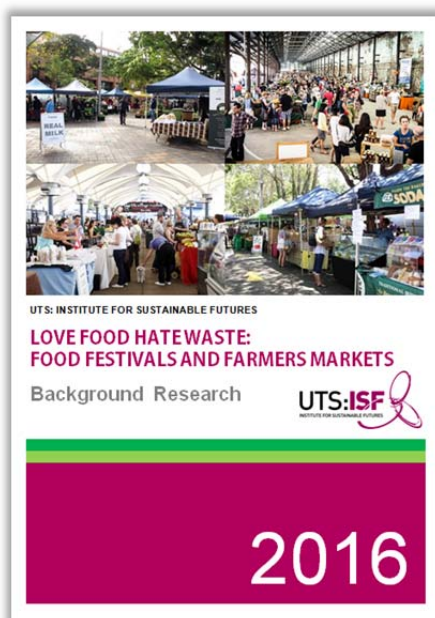
## Findings from pilot and background research

Initial background research by ISF with food stallholders at farmers markets in the City of Sydney revealed the following findings that are relevant to food festivals:

- Stallholders are time poor and it will be difficult to engage them directly with materials.
- Stallholders don't consider food that is composted or otherwise recycled as "waste".
- Interviews and bin inspections at markets suggest there is less avoidable food waste generated by food stallholders compared to the average of the traditional food retail and hospitality industry.
- Anecdotal reports by stallholders suggest that stallholder waste at festivals is greater than stallholder waste at farmers markets.
- Many resources exist for festival/event organisers to increase the sustainability of their event and/or reduce their waste. Few if any of these resources include avoiding food waste, meaning a gap currently exists for festival organisers.
- Resources for avoiding food waste by food businesses are currently geared towards the traditional store-based, food retail and hospital industry and need to be translated into the context of festivals and events to be relevant to time-poor stallholders.

These findings helped to shape the education resources developed which were piloted at the 2016 Pyrmont-Mudgee Food and Wine Festival. The pilot tested preliminary findings from the Background Research, piloted a communication and engagement process, and surveyed stallholders for their knowledge, confidence and ease of participation, to ultimately inform the development of guidance resources.

More details are available in the Background Research and Pyrmont Festival Pilot reports:



Downes, J. & Cordell, D. (2016) *Food Waste at Festivals & Markets: Background Research*. Prepared by the Institute for Sustainable Futures, University of Technology Sydney.



Downes, J. & Cordell, D. (2016) *Food Waste at Festivals & Markets: Pyrmont Festival Pilot*. Prepared by the Institute for Sustainable Futures, University of Technology Sydney.

## 2 APPROACH

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The trial at the Yamba Coldstream Festival sought to achieve two main goals:

- demonstrate that the online FoodStallSavers toolkit can stand alone as a resource and be used without intensive support
- make any required refinements to the toolkit in order for it to fully standalone.

Participants in the trial included the festival Resource Recovery Coordinator (as the 'organiser') and 16 'prepared food' stallholder businesses. The Surfing the Coldstream Festival differed from the Pymont Festival trial in the following ways:

- Coldstream was a 1 day festival, whereas Pymont was 2 day festival
- occurred in a regional area, while Pymont is urban
- Coldstream Festival's theme was music, while Pymont's was food and wine
- the festival's waste reduction initiatives were broader than food waste avoidance
- the 'organiser' of the initiative was the Resource Recovery Coordinator who was managing all waste initiatives, had prior knowledge of waste management and worked concurrently at the Yamba Famers Market on waste reduction initiatives
- the avoidable food waste initiatives were limited to the event organiser and stallholders only (i.e. the public were not involved).

The organiser at the Coldstream Festival volunteered to trial the FoodStallSavers toolkit as a part of the festival's broader waste reduction efforts. Other waste reduction efforts for the festival included the goal of a 'plastic free festival' by requiring compostable cutlery and servingware, providing a water station and compostable cups and providing clearly marked bins separating waste into three streams: landfill, recycling and organic waste.

### Engagement with Organiser

ISF's engagement with the organiser was via email/phone on a weekly or fortnightly basis.

The link to the online FoodStallSavers toolkit was emailed to the organiser several months prior to the festival and the 5 week organisers implementation plan was provided 6 weeks from the festival. ISF also shared the online stallholder toolkit which the organiser sent to the 16 participating stallholders. The organiser also completed a post-trial survey with ISF.

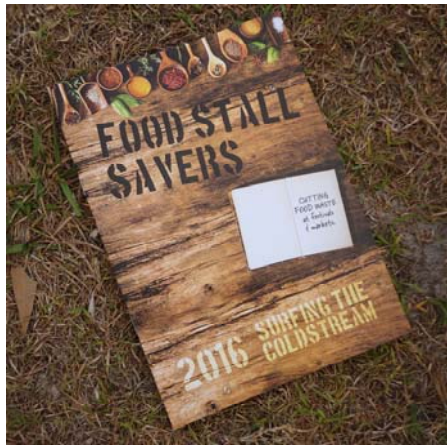
### Engagement with Stallholders

The coordinator invited the 'prepared food' (hot food, beverage and ice cream) stallholders to utilise the 'prepared food' section of the FoodStallSavers toolkit and contacted them regularly via phone, email and SMS to discuss the trial and toolkit. This was alongside other discussions about waste reduction initiatives for the event.

Prior to, and after, the event the 16 stallholders were invited to complete a survey. Email templates and a link for this survey were provided to the organiser.

Prior to the event, the stallholder FoodStallSavers toolkit contents and action plan were summarised into an 8 page hardcopy booklet by the organiser. It was suggested by the organiser that this format would be more suitable and accessible to the event stallholders than the online FoodStallSavers toolkit.

### *Eight- page FoodStallSavers Toolkit booklet*



At the event, a rough bin audit was conducted to determine the quantity of avoidable and unavoidable food waste generated by stallholders (back of house) at the event. This was coordinated by the resource recovery coordinator with advice from ISF and assistance from volunteers.

Food waste at the festival was measured for stallholders ('back of house' waste) only. This was managed by the organiser with assistance from three volunteers. The measurements were conducted from the festival opening (approximately 11am) until 3pm when the volunteers were available. However, the festival continued until 10pm and the waste produced during this time was not measured.

The purpose of the measurement was to understand the amount of avoidable and unavoidable food waste at the festival, and establish a baseline for the Festival where possible. Each pair of food stalls was given two boxes to share and was asked to place:

- avoidable (or edible) food in one box (e.g. unused ingredients, leftover products, burnt or damaged food etc.)
- unavoidable (inedible) food in another box (e.g. fruit peels, vegetable top and tails, seafood shells etc.).

The boxes were checked regularly and emptied when full. The amounts of avoidable and unavoidable waste were then weighed and recorded.

### *Examples of stallholder food waste bins*





## 3 RESULTS

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### Organiser engagement

A key aim of the Yamba festival food waste trial was to determine if Festival organisers could successfully implement a food waste avoidance initiative at their event using an online educational resource.

In comparison to the Pyrmont Festival pilot, where substantial direct support was provided to Festival Organisers in organising initiatives and engaged stallholders, direct support by the Project Team for the Yamba Coldstream festival was limited to information and advice provided to the Organiser, plus provision of the online toolkit.

Overall the content of the toolkit was useful and appropriate to helping the organiser:

- gain a general understanding of the food waste problem
- differentiate between avoidable and unavoidable food waste
- raise stallholder awareness about avoidable food waste.

It was highlighted by the event coordinator upfront that time was limited to read the entirety of the toolkit contents. The level of detail was too much for the time the organiser had available. More summarised tips (7-10 words/bullet points vs a paragraph) would have been easier.

The organiser worked mostly from her phone or laptop (without a home office) and was therefore required to read the toolkit contents on a smart phone. The detail of the toolkit made reading difficult on a small screen.

The 5 week implementation plan was helpful to the organiser and having prior knowledge of waste management made the toolkit easy to understand. However having this prior knowledge meant only some of the suggested actions were new to the organiser. The checklist was helpful but it was suggested an 'Email drip feed – with reminders from the checklist over the 5 weeks' could be helpful for the organiser in the future.

#### **Key finding:**

*Festival organisers are time poor and need direct support in delivering food waste avoidance initiatives at their events.*

### Stallholder engagement

16 stallholders were invited to participate in the trial, via emails sent from the festival organiser. Of these:

- 8 stallholders visited the online toolkit, 30 times in total
- 4 stallholders completed the pre-survey
- 16 stallholders received the hardcopy flyer at the event
- 16 stallholders participated in the bin audit/food waste measurement activity
- 3 completed the post/evaluation survey.

Due to the small number of completed surveys, before and after comparisons could not be undertaken. The following is a general discussion of the information gathered through the survey.



### Sources of Food Waste

Sources of food waste identified by stallholders in the pre-survey included:

- leftover food
- tops and tails of potatoes and sweet potatoes
- small amount of ice cream that melts
- waffle cones that had been on display.

### Importance of Food Waste

All stallholders who responded to the survey stated that food waste was either **very** (5) or **extremely** (2) important to them. Of the 2 respondents completing both pre-and post-surveys importance was ranked either the same as the pre-survey (very important) or increased from very important to extremely important.

### Usefulness of FoodStallSavers Initiative

All stallholders who responded to the post-survey question about the initiative's usefulness found it **somewhat** or **very** useful/interesting to participate in the initiative, and either **somewhat**, **very** or **extremely** easy to participate.

### Food waste actions

Before the FoodStallSavers initiative, three-quarters or more of stallholders reported already undertaking the following actions to reduce food waste:

- consolidate/adjust menu to reduce waste (eg. remove dishes with lower sales)
- minimise spoilage or damage of product through specific storage or packaging practices
- plan stock levels to sell out before the end of the stall, so no leftovers
- discount or give away surplus prepared food at end of day
- actively track how much stock sells at events to better estimate how much is needed in future.

At the same time, half the stallholders reported already undertaken the following actions:

- source food from local sources to maximise freshness and minimise transport/handling
- refine ordering procedure to avoid over-ordering stock
- check use by and best before dates on stock to reduce spoilage (*\*increased*)
- use photos or other mock displays, rather than using real food or samples
- cook to order, rather than pre-cooking in bulk
- bring home surplus ingredients/prepared food to use at future events
- actively track the amount and type of food waste created by stall (*\*increased*).

Only one stallholder in each case reported undertaking the following activities:

- check whether food is commonly left on the plate and thrown out by customers (eg. chips)
- donate surplus ingredients/prepared food to food rescue charity

Following the FoodStallSaver initiative, stallholders also reported undertaking the following actions, while the two actions above with an (\*) increased:

- design the menu to use the whole of each ingredient (all parts of the food)
- educate consumers on reducing food waste.

**Knowledge about food waste**

In the before and after surveys, stallholders were asked questions to gauge their level of knowledge about the scale and impact of food waste. Few stallholders responded to these questions, indicating a lack of knowledge and/or interest. This differed substantially from the Pyrmont Festival pilot, when a large number of stallholders correctly answered these questions.

When asked to place food waste actions in a hierarchy, 2 stallholders correctly recreated the food waste hierarchy (left) while one stallholder was close. This differed substantially from the Pyrmont Festival pilot, where most stallholders could not place the actions in the correct order.

**Correct food waste hierarchy (2 stallholders)**



**Close to correct hierarchy (1 stallholder)**



**Key findings:**

*Three quarters or more of stallholders are already taken actions to reduce food waste – the number of additional actions completed was minimal*



### **Feedback on Barriers**

One response received from stallholders on the initiative overall:

*"I think it's a great concept but for some stallholders, waste separation is impractical - we travel and can only pack so much into limited spaces. Plus the time taken to separate waste can be costly. Remember, most of us aren't trading 5 or more days a week, rather a few times a month."*

When asked if they had learned something new about food waste, one stallholder responded:

*"Well yes and no. Food waste costs \$ and we've taken as many steps to reduce it as we possibly can. But we cannot influence poor turnout, sales or adverse weather etc. In these cases, some waste is inevitable as many do not have an outlet to sell foodstuff until the following weekend. This system would work better for cafes/restaurants that trade daily."*

### **FoodStallSavers online toolkit and hardcopy brochure**

A direct link to the FoodStall Saver stallholder toolkit was provided to all stallholders in an email from the organiser prior to the event, while all stallholders received a hardcopy of the booklet at the Festival. The 8 page hardcopy booklet produced for the festival included tips on avoidable food waste as well as an action plan. However, the flyer was not printed in time to be given to stallholders before the event to consider pre-event avoidable food waste actions. This may have reduced the ability for stallholders to consider reducing avoidable food waste prior to the event, particularly if they had not visited the online toolkit.

When asked in the post-survey, two stallholders reported not receiving the link to the online toolkit, suggesting the email communication from the organiser was not as effective as it could have been. One stallholder indicated they had read the online information and used it to take action. The two stallholders who did not receive the online toolkit did report receiving the hardcopy booklet, and used it to take action.

One stallholder found the toolkit/brochure **somewhat** useful/interesting while two found it **very** useful/interesting.

All stallholders said they would use the toolkit for future festivals

#### **Key finding:**

*Due to logistical issues, few stallholders used the toolkit for the Yamba festival but all reported they would use it for future festivals.*



## Festival audit

Overall the stallholders were willing to participate in the bin measurement process and place food waste in the provided boxes. Given the setup of some stalls (fully enclosed) it may be that not all food waste was disposed in these shared bins but may have gone into bins within the food stall. Some stallholders needed assistance with emptying their food waste into the provided boxes during busy periods.

At the end of the one day festival **10.39kg** (35%) of edible/avoidable food waste and **19.94kg** (65) of inedible/unavoidable food waste was produced by the 16 prepared (hot) food stallholders. 83% of the edible food waste was produced by one stall.

### Food waste collection bins



It should be noted that some of what stallholders placed in the 'inedible' food waste bins could be considered avoidable, or at least potentially avoidable. The figures should therefore not be directly compared to the Pyrmont Festival findings where the sorting was done by the research team.

The organiser contacted food rescue organisations to dispose of any edible food, however none were interested or willing to receive recovered food from the festival.

***Stallholder comments***

Stallholders were willing to discuss their food waste habits in some brief conversations with the volunteers at the festival. Some of their comments include:

*"I don't produce any waste, I give any leftovers to other stallholders."*

*"I used to cook onions on the BBQ at the start of the event but noticed they were getting wasted - now I use caramelised onions as they keep longer and less are wasted."*

*"I wanted to add waste oil to the organic waste bin but could not so I have to find alternative ways to dispose of the waste oil."*

*"I put leftover coleslaw in slow cooker to create another dish."*

## 4 CONCLUSIONS & RECOMMENDATIONS

### Summary of Yamba findings

The trial (and the post-trial survey with the event organiser) uncovered some key barriers that organisers and stallholders face in understanding and managing food waste at festivals. **The most prominent finding was the limited amount of time available by organisers and stallholders to access and digest the toolkit contents.**

#### *Barriers to food waste avoidance*

Festival organisers	Food stallholders
<ul style="list-style-type: none"> <li>• Time limited, rushing to deadlines and condensing tasks into a short amount of time prior to the event</li> <li>• Managing multiple stakeholders</li> <li>• Acting in a voluntary or 'break even' capacity</li> <li>• Finding the right language to motivate stallholders to act</li> <li>• Providing support beyond conversations and the toolkit was limited to available time</li> <li>• Meeting with stallholders challenging as they are working far apart/separately</li> </ul>	<ul style="list-style-type: none"> <li>• Working at multiple events, at times rushing between multiple events in a short period of time (one stallholder attended multiple events per week)</li> <li>• Small businesses (often family owned)</li> <li>• Limited in resources and skills for business administration (including utilising the internet for email and websites, working set business hours etc).</li> <li>• Prioritising food waste above other tasks</li> </ul>

The post-festival survey with the organiser identified the following additional findings:

- The toolkit, emails, phone calls and SMS messages were helpful but the face-to-face interaction was the most valuable – tips on engaging in these conversations (language, phrases, statements, punchlines) would be helpful
- It was only when someone was standing next to the bins that people changed their behaviour
- Saying that “it saves you money” was not effective – sharing stories with stallholders was more effective
- Computer literacy and age of stallholder were factors in how well they engaged (more computer literate and younger stallholders were more engaged).

## Overall Conclusions

The Pyrmont Festival recommendations provide a starting point for conclusions from the Coldstream Festival trial:

***Pyrmont Pilot Recommendation 1: It is worth developing food waste avoidance initiatives at festivals, despite suggestions that stallholders don't generate waste. However, ideally this should be undertaken in an integrated way as part of broader sustainability initiatives at a Festival, to maximise participation, momentum and ultimately impact.***

The Coldstream festival included the avoidable food waste trial alongside other waste and sustainability initiatives for the event. The key advantage of this was working alongside an organiser/champion with a prior knowledge and awareness of waste reduction and its importance. The food waste avoidance initiative was easy to integrate alongside other waste reduction initiatives occurring at the event. **Conversations on waste reduction between organiser and stallholders can easily be expanded to include food waste.**

***Pyrmont Pilot Recommendation 2: Engage organisers as key entry point to develop initiative. Organisers in turn are responsible for engaging stallholders to advise and support them in developing and implementing stallholder action plans.***

The Coldstream festival trial's success was largely due to the organiser who proactively sought out the FoodStallSaver initiative and offered the Festival as a trial case for using the toolkit to engage stallholders. The organiser was motivated to address festival waste in other areas prior to this trial. **Therefore engaging not only organisers, but passionate waste reduction staff/volunteers to champion the initiative is an important first step.**

The Coldstream festival organiser also had prior relationships with the stallholders (in her role at the Yamba Farmers Market) which allowed for conversations and awareness-raising to occur freely. However, barriers still exist with identifying the right language and motivation for stallholders to act. It was suggested that stories of other stallholders successfully avoiding food waste (such as re-purposing leftovers or food scraps) would be a way to motivate and engage stallholders on the topic. **In particular, the face-to-face conversations about food waste at the event were considered very valuable and tips on statements/phrases or wording would be helpful.** Providing support beyond conversations and the toolkit was challenging for the organiser due to time limitations, and the action plans were not provided as early as hoped. Providing the stallholder with templates of emails to use to engage stallholders assisted with keeping emails time efficient.

***Pyrmont Pilot Recommendation 3: Online guidance material to support both stallholders and organisers can play an important role and is worth developing, but importantly the material supports rather than replaces the need for direct stallholder engagement.***

The online guidance material played an important role in the Coldstream festival initiative, and confirmed it as a focal point for the organiser to understand avoidable food waste and engage festival stallholders in the topic. **However the content provided was too detailed for both organiser and stallholders and needed to be summarised.** In addition, to overcome the limited business administration resources of small stallholder businesses, a hardcopy version of the toolkit contents and action plan was necessary. Though it was recognised that the toolkit did not replace the need for direct engagement, engaging stallholders was challenging due to time constraints of the organiser. **In addition to the toolkit, organisers need some direct support in delivering food waste avoidance initiatives at their events.** For example, it was suggested an 'Email drip feed – with reminders from the checklist over the 5 weeks' could be helpful for the organiser in the future.

***Pyrmont Pilot Recommendation 4: Measuring a baseline of food waste generation by stallholders and consumers at Festivals is a useful way to: a) inform the design of the food waste avoidance strategy, b) estimate cost savings from reduce waste collection, c) evaluate the effectiveness of the initiative once implemented.***

The bin audit conducted at the Coldstream festival trial was useful for the purposes of creating a baseline of the quantity of food waste from this festival which could be used for tracking and monitoring in the future, estimating cost savings and designing future food waste strategies. The presence of volunteers allowed the audit to be completed successfully, however, the evaluation of this data was conducted by ISF rather than the festival organiser. After an event is finished, there is often little time for reflection or continual improvement. Organisers are often volunteers who must move to the next project, or stallholders who must plan for the next event. To allow complete autonomy of a bin audit, it may be helpful for organisers to be able to easily summarise bin audit data into tangible benefits for stallholders which can be shared real time or immediately after the event.

***Pyrmont Pilot Recommendation 5: Engaging consumers before (e.g. via web and social media) and during the Festival (e.g via the info stall) is useful to both: a) promote the sustainability-related food waste avoidance initiative that will be taking place, including what stallholders are doing, and b) encouraging consumers to participate directly if there are front-of-house food waste bins, and indirectly by providing resources for households to reduce food waste generation.***

This recommendation does not apply to the Coldstream Festival as the trial did not focus on engaging festival attendees.

***Pyrmont Pilot Recommendation 6: Undertake a further pilot focused specifically on testing an approach to engaging organisers which enables them to take responsibility for engaging stallholders.***

The Coldstream Festival trial was a successful pilot with a festival organiser who took responsibility for engaging stallholders on the topic of avoidable food waste. However the barriers of time, access to motivational language and format and timely delivery of educational materials were identified as improvements for implementation of these resources with a festival organiser in the future.



## Recommendations

Recommendations for **implementing food waste avoidance initiatives at festivals** include:

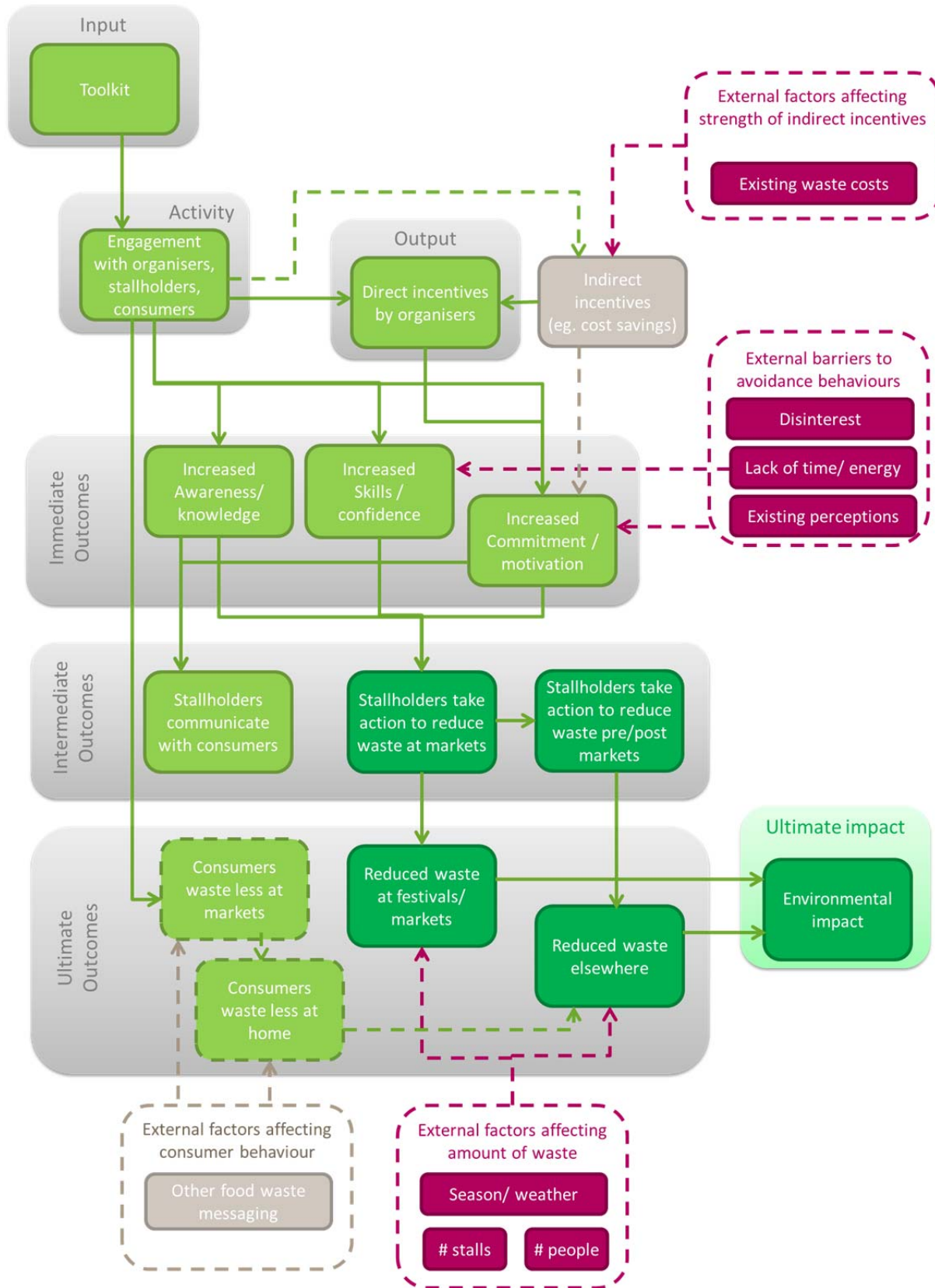
- engage organisers/staff/volunteers who are passionate and aware of waste reduction
- integrate food waste avoidance strategies into wider waste reduction efforts
- ensure organisers have adequate time to review resources and implement a food waste avoidance strategy themselves, as well as with stallholders, particularly highlight that the toolkit on its own is not sufficient to educate stallholders
- target organisers who may have pre-existing relationships with stallholder businesses (e.g. deliver multiple festivals/markets in the one area), if possible
- provide organisers with advice on language and motivational phrases to help engage stallholders on the issue of avoidable food waste (especially face-to-face conversations)
- time the provision of resources such as stallholder action plans appropriately
- include a mix of online and hardcopy information (including action plans) to accommodate varying levels of accessibility to the internet
- ensure online information about food waste avoidance is succinct and able to be read quickly
- where bin audits are undertaken, ensure data can be easily captured and summarised into tangible benefits during or after the event.

Recommendations for **improving the FoodStallSavers online toolkit** include:

- Immediate improvements:
  - summarise toolkit content where possible to ensure it can be read quickly and easily
  - include hardcopy materials which organisers can download and print to share with stallholders (such as 8 page toolkit brochure)
  - include stallholder “voices” via testimonials in online toolkit content and hardcopy materials
  - include email templates that organisers can ‘cut and paste’ to engage stallholders.
- Long term improvements (with additional funding):
  - develop a communications guide that organisers can use with stallholders e.g. suggested motivational phrases that organisers can use to engage stallholders in avoidable food waste - in particular during face-to-face conversations
  - add short case studies of stallholders who have successfully avoided food waste
  - provide an “email drip feed” – with reminders from the checklist over the 5 weeks
  - improve toolkit website to be smart-phone compatible.

# APPENDICES

# A ORIGINAL PROGRAM LOGIC



## B IMPLEMENTATION

### Email invitation to stallholders from organiser



**Love Food Hate Waste**  
**Avoidable Food Waste Program**  
**Surfing the Coldstream Festival 2016**

Dear Stall Holder,

**For your attention please** In 2016 The Surfing the Coldstream Festival is partnering with the Institute for Sustainable Futures (ISF) at the University of Technology Sydney in order to increase the sustainability of the Festival, with a particular emphasis on food-related waste <http://foodstallsavers.org.au/stallholders/>

**We need your participation in our efforts to make the Festival more sustainable.** This is separate to the compostable packaging; this program is dealing with food waste. There is an awesome kit that will be helpful for you <http://foodstallsavers.org.au/stallholders/>

**What this will involve**

The tool kit helps you:

- understand the fate of food products sold at the fair: from production to consumption
- identify and promote the great initiatives you may already be undertaking
- improve practices where possible
- evaluate the effect of the project on your business, through a voluntary before and after survey.

In order to do this, **we will be in contact with you to discuss and plan your participation between now and the Festival.** Some of these conversations have already begun and it is exciting to hear the great steps already being undertaken by some stallholders!

It is expected that this will involve a short weekly/bi weekly contact by text, email or phone.

**Benefits of participating**

- Your participation may save your business money on food and waste costs, and, will lead to better environmental outcomes by diverting waste from landfill.

If you have any concerns about participating please let me know.

Kind Regards

## Reminder email to stallholders from organiser

### Be a Food Stall Saver

The program is here to help you save money and the planet. It is designed by the University of Technology, Sydney: Institute of Sustainable Futures <https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures>, from a grant from the EPA

These tips help you, as part of your wider environmental commitments to customers and event organisers, or a starting point for embarking on a journey to becoming a waste wise stallholder. <http://foodstallsavers.org.au/stallholders/prepared/>

If you have used the above, please fill in this survey, the EPA, ISF and UTS will gauge the success of the program on these results <https://www.surveymonkey.com/r/FestivalFoodWaste>



## Survey email to stallholders from organiser



*Dear Stallholder,*

*Can you spare 5 mins to complete this survey to wrap up our food waste project research? <https://www.surveymonkey.com/r/FestivalFoodWasteEval> (if you have already completed the survey then **THANKYOU!**)*

*You may recall the FoodStallSavers food waste initiative at the Coldstream Festival in Yamba last month, the online toolkit <http://foodstallsavers.org.au/> and the flyer with action plan I gave to you at your stall.*

***THANKYOU** to all who participated in the pre-survey and the bin audit at the festival.*

*The flyer we provided to you at the festival contained an action plan that you can use at other festivals to help save money by avoiding the creation of food waste.*

*As part of our research we are seeking response to our follow up survey. Can you assist our research by completing this survey?*

*Many thanks!*

## C EVALUATION SURVEYS

### Stallholder baseline survey

#### BASELINE SURVEY

#### 'Food Stall Savers' food waste pilot at Yamba Coldstream Festival

Thanks for completing this short survey for our Food Stall Savers pilot at the 2016 Surfing the Coldstream Yamba Festival. We expect it should take about 5 minutes of your time.

Data collected in this survey will be kept confidential. Results will be aggregated and reported anonymously. Your business will be listed as completing the survey, but no information will be attributable directly to you.

### PART 1: Your business

Your name?

Your business name?

How often is your stall at a festival or market?

Multiple times a week	About once a week	About once a month	Every now and then
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

How many people would usually work at your stall on one day?

1	2-3	4+
<input type="text"/>	<input type="text"/>	<input type="text"/>

### PART 2: Your operations

*These questions seek to understand how your food stall business operates.*

How much food waste do you think your stall business currently produces?

None	Not much	A little bit	A fair amount	A lot
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

What makes up your food waste mainly (if any)?

**How important would you say avoiding food waste is to you?**

Not at all important	Not that important	Neutral	Somewhat important	Very important

*Why, or why not?*

**Do any of the following ever occur – before, at, or after your stall?**

- Some ingredients are damaged or spoil during transportation or storage before event
- Some contamination occurs in food storage area before event
  
- Some parts of ingredients not used, as not required in menu (eg. egg yolks, green tops of scallions/leeks, etc)
  
- Some whole ingredients not used on event day, as stock exceeds requirements
  
- Some prepared food not sold on event day, as cooked excess to requirements
  
- Some batches of prepared food are faulty (eg. burnt) and can't be sold at end of event day
  
- Samples or displayed prepared food that can't be eaten/sold at end of event day
- Leftover ingredients/prepared food are not taken home at end of event day
- Leftover ingredients/prepared food are damaged or spoil during transportation home from event day
  
- Leftover ingredients/prepared food taken home that don't get used at future events

**Which of the following do you currently do?**

- Design the menu to use the whole of each ingredient (all parts of the food)
- Source food from local sources to maximise freshness and minimise transport/handling
- Refine ordering procedure to avoid over-ordering stock
- Check use by and best before dates on stock to reduce spillage
- Minimise spoilage or damage of product through
  - ... specific storage practices
  - ... specific handling practices
  - ... specific packaging practices
  - ... specific display practices
- Track how much stock sells at events to better estimate how much is needed and minimise surplus
- Plan stock levels to sell out before the end of the stall, so no leftovers
- Discount or give away surplus prepared food at end of day
- Donate surplus ingredients/prepared food to food rescue charity
- Actively monitor/track the amount of food waste created by stall
- Check whether food is commonly left on the plate and thrown out by customers (eg. chips)
- Consolidate/adjust menu to reduce waste (eg. remove dishes with lower sales)
- Educate consumers on reducing food waste

*Any comments on the above?*

**Is there anything stopping you from doing more to avoid food waste?  
(eg. time/effort/cost, staff knowledge, etc)**

### **PART 3: General Food Waste Knowledge**

*The purpose of these questions is simply to gauge the level of awareness of food waste amongst stall owners.*

**Please estimate the scale of food waste for each of the following 2 scenarios**

	About 5%	About 10%	About 20%	About 40%	About 50%
Of the total waste sent to landfill by the NSW food retail industry, what proportion is food waste?					
What proportion of food waste from the NSW food service industry is created by the consumer after purchase (ie. plate waste)?					

**Can you name any environmental impacts of food waste?**

The food waste hierarchy sets out the preferred order of actions to avoid and manage food waste.

**Please rank the following actions in the order you think they appear in the food waste hierarchy, where 1 is most preferred/highest priority and 6 is least preferred/lowest priority.**

<b>RECYCLE</b> – compost	(*4)
<b>REPURPOSE</b> – use to feed livestock	(*3)
<b>REDUCE</b> – avoid through minimising damage, spoiling, surplus	(*1)
<b>DISPOSE</b> – send to landfill	(*6)
<b>RECOVER</b> – convert to bioenergy	(*5)
<b>REUSE</b> – eat surplus yourself, give away, donate to people in need	(*2)



**Stallholder evaluation survey**

**EVALUATION SURVEY**

**'Food Stall Savers' food waste pilot  
at Yamba Coldstream Festival**

**PART 1: Your participation in the Yamba Coldstream Festival food waste trial**

The festival food waste initiative involved three main components:

1. Direct contact from the festival organiser in the form of emails and phone calls,
2. Being provided with information in the form of an Online Toolkit and a Hardcopy Booklet,
3. Completing surveys (the baseline survey and this survey).

*(Overall experience)*

**Please rate your overall experience of participating in the food waste initiative, in terms of:**

**- How easy/effortless it was to participate:**

Not at all easy	Not that easy	Somewhat easy	Very easy	Extremely easy
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**- How useful/interesting it was to participate:**

Not at all useful/interesting	Not that useful/interesting	Somewhat useful/interesting	Very useful/interesting	Extremely useful/interesting
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**A key aspect of the festival was collecting and measuring stallholder food waste.**

**Please rate how easy it was for your stall staff to use the styrofoam boxes to dispose of your food waste?**

Not at all easy	Not that easy	Somewhat easy	Very easy	Extremely easy
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**Any comments about how easy / useful / interesting the initiative was?**

**What do you think we could do differently or additionally next time to make the initiative more useful / interesting?**

(Booklet)

As part of the food waste initiative, stallholders were given a hardcopy Food Stall Savers booklet, and sent a link to an online Food Stall Savers toolkit:

Hardcopy booklet



Online toolkit



Did you receive, read or use the hardcopy booklet and/or online toolkit?

<b>Hardcopy booklet</b>	Did not receive	Received, but have not looked at	Looked at, but have not used	Read and used the information to take action
<b>Online toolkit</b>	Did not receive	Received, but have not looked at	Looked at, but have not used	Read and used the information to take action

If you looked at the hardcopy booklet and/or the online toolkit, please rate these specific aspects, in terms of how useful/interesting they were?

(If you did not receive, please skip this question.)

<b>Hardcopy booklet and action plan</b>	Not at all useful/interesting	Not that useful/interesting	Somewhat useful/interesting	Very useful/interesting	Extremely useful/interesting
<b>Online <u>Food waste facts</u></b>	Not at all useful/interesting	Not that useful/interesting	Somewhat useful/interesting	Very useful/interesting	Extremely useful/interesting
<b><u>Online toolkit</u> - Step 1: Sources of food waste for stallholders</b>	Not at all useful/interesting	Not that useful/interesting	Somewhat useful/interesting	Very useful/interesting	Extremely useful/interesting
<b><u>Online toolkit</u> - Step 2: Suggested initiatives</b>	Not at all useful/interesting	Not that useful/interesting	Somewhat useful/interesting	Very useful/interesting	Extremely useful/interesting
<b><u>Online toolkit</u> - Step 3: Action plan</b>	Not at all useful/interesting	Not that useful/interesting	Somewhat useful/interesting	Very useful/interesting	Extremely useful/interesting

How could we change the Hardcopy Booklet and Online Toolkit to make them more interesting/useful?

## **PART 2: Your business**

These questions repeat some of the questions asked in the baseline survey.

**How important would you say avoiding food waste is to you?**

Not at all important	Not that important	Neutral	Somewhat important	Very important
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**Do you think the amount of food waste your business currently produces has reduced as a result of participating in the Festival Food Waste initiative?**

No	Not much	A little bit	A fair amount	A lot	N/A – no waste
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**Have you learned anything new about avoiding/managing food waste that you could put into practice in the future in your business?**

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**Would you consider use the online toolkit or hardcopy booklet for future festivals or markets?**

No	Unlikely	Possibly	Probably	Definitely
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**How confident are you that you have the skills and resources to further reduce the amount of food waste your stall business creates (throughout the whole lifecycle)?**

Not at all confident	Not that confident	Somewhat confident	Very confident	Extremely confident	N/A no food waste to 'reduce'
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**Which of the following do you currently do, or might you consider doing in the future BEFORE events?**

	Currently do	Might do in future
<b>Design the menu to use the whole of each ingredient (all parts of the food)</b>		
<b>Consolidate/adjust menu to reduce waste (eg. remove dishes with lower sales)</b>		
<b>Source food from local sources to maximise freshness and minimise transport/handling</b>		
<b>Refine ordering procedure to avoid over-ordering stock</b>		

<b>Check use by and best before dates on stock to reduce spoilage</b>		
<b>Minimise spoilage or damage of product through specific storage or packaging practices</b>		

**Which of the following do you currently do, or might you consider doing in the future AT or AFTER events?**

	Currently do	Might do in future
<b>Actively track how much stock sells at events to better estimate how much is needed in future</b>		
<b>Plan stock levels to sell out before the end of the stall, so no leftovers</b>		
<b>Use photos or other mock displays, rather than using real food or samples</b>		
<b>Minimise spoilage or damage of product through specific storage or handling practices</b>		
<b>Cook to order, rather than precooking in bulk</b>		
<b>Discount or give away surplus prepared food at end of day</b>		
<b>Donate surplus ingredients/prepared food to food rescue charity</b>		
<b>Bring home surplus ingredients/prepared food to use at future events</b>		
<b>Actively track the amount and type of food waste created by stall</b>		
<b>Check whether food is commonly left on the plate and thrown out by customers (eg. chips)</b>		
<b>Educate consumers on how to reduce food waste</b>		

**Any comments on the above?**

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### **PART 3: General Food Waste Knowledge**

The following questions relate to information provided to you during the trial. The purpose of these questions is to gauge the effectiveness of the communications in increasing general knowledge about food waste.

**Please estimate the scale of food waste for the following scenarios:**

<b>What proportion of <u>all waste</u> sent to landfill by the NSW food retail industry is food waste?</b>	About 5%	About 10%	About 20%	About 40%	About 50%
<b>What proportion of <u>food waste</u> generated by the food retail industry is generated by the consumer after purchased (ie. plate waste)?</b>	About 5%	About 10%	About 20%	About 40%	About 50%

**Can you name any environmental impacts of food waste?**

The ‘food waste hierarchy’ is a concept that sets out the preferred order of actions to avoid and manage food waste, based on the level of environmental benefit.

**Please rank the following actions in the order you think they appear in the food waste hierarchy, where 1 is most preferred/highest priority and 6 is least preferred/lowest priority.**

<b>RECYCLE</b> – compost	(*4)
<b>REPURPOSE</b> – use to feed livestock	(*3)
<b>REDUCE</b> – avoid through minimising damage, spoiling, surplus	(*1)
<b>DISPOSE</b> – send to landfill	(*6)
<b>RECOVER</b> – convert to bioenergy	(*5)
<b>REUSE</b> – eat surplus yourself, give away, donate to people in need	(*2)

## Organiser evaluation survey

As you may recall we provided you with the online Organisers Toolkit, including the 5 week implementation plan, and as well, cut and pasted the implementation plan into an email for you to make it easier. We also provided an online Stallholder Toolkit, from which the hardcopy brochure for stallholders was developed.

### Part 1: ORGANISERS toolkit and implementing a food waste initiative

*The following questions relate to how easy and useful it was for you as a Festival/Market Organiser to implement a stallholder food waste initiative at your event, using the Food Stall Savers Organisers' Toolkit.*

#### 1. How easy was it to use this information?

Not at all easy	Not that easy	Somewhat easy	Very easy	Extremely easy
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How could we have made this information easier to use? (Aside from emailing the contents)

#### 2. How often did you visit the ORGANISERS Toolkit webpage for information?

Not at all	Only once	A few times	Regularly
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What affected your ability to visit/use the online Organisers Toolkit?

#### 3. How useful were the steps of the ORGANISERS implementation plan in the 5 weeks leading up to the festival?

Not at all useful	Not that useful	Somewhat useful	Very useful	Extremely useful
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Was anything missing?

#### 4. Could you have used more assistance with using this implementation plan / implementing the initiative at your event? If yes, what?

#### 5. Do you think the Organisers' toolkit and Implementation plan could be easily used by other festival/market organisers (e.g. would you use it at the Yamba Farmers Market)?



6. What (top 2) changes would you suggest for the ORGANISER SECTION of the toolkit to make it able to be used without assistance?

7. What was your experience of trying to engage a food rescue organisation for your festival?

**Part 2: STALLHOLDERS toolkit and reducing stallholder food waste**

*The following questions relate to your opinion about the usefulness of the Stallholder toolkit (online resource and booklet) and how effective they are at reducing stallholder food waste and your and future events.*

8. Do you think stallholders engaged with the online toolkit? If yes, how? If no, why not?

9. Do you think stallholders engaged with the printed 8 page flyer? If yes, how? If no, why not?

10. What barriers did you face in engaging stallholders with this food waste initiative?

11. Once the process was underway, did you notice changes in stallholder behaviour in your engagement with them during and after the festival, related to food waste?

12. Incentivising stallholders to participate is a key part of achieving change. Do you have any thoughts on how stallholders could be incentivised to participate?

Do you have any final or comments about the Food Stall Savers food waste initiative?

