

FORMATIVE RESEARCH REPORT

BARRIERS AND MOTIVATORS TO USING REUSABLE SHOPPING BAGS

as an alternative to light plastic bags in the Syunik province of Armenia

Research Report: Barriers and motivators to using reusable shopping bags as an alternative to light plastic bags in the Syunik province of Armenia

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KEY TERMS USED

In the context of this report, the following terms have the meaning explained below.

Plastic bags: Low-density polyethylene (LDPE) bags with a simple handle that are provided in the researched shops free of charge.

Reusable bags: Light, foldable, multiple-reuse polyester bags – a type that will be promoted by the project. The reasons for promoting this type of bag are explained on the following page.

Shops: In the context of the research process, the term "shops" refers to stores where the observations and interviews with sellers and managers took place. In the context of the follow-up intervention, the term "shops" refers to the stores targeted by the project activities which are focusing on new commercial, long-term supply of reusable bags.

Customers: People living in and around the towns of Goris and Kapan who do their shopping in the targeted shops.

1. INTRODUCTION

From July 2019 to March 2020, the non-governmental organization People in Need (PIN) is implementing the project "Reduce, Reuse! Become a Friend of Nature" funded by the British Embassy in Yerevan. This intervention aims to contribute to lasting reduction in the usage of low-density polyethylene (LDPE) bags in the Syunik province of Armenia. These bags are currently provided free of charge by most major shops and contribute to an unsustainable overuse of natural resources, and physical as well as visual pollution of the environment. As a part of the project, PIN Armenia conducted research intending to understand the real, not assumed, barriers and motivators to using reusable bags. The research findings were expected to



contribute to refining the project's behaviour change strategy.

The **behaviour studied** under this research was: "Adult men and women who might go shopping take their own bag and use it to carry what they bought." It was selected due to:

- effectively complementing the fees for (and later a complete ban of) plastic shopping bags planned by the Armenian Ministry of Environment
- being more feasible than asking sellers to voluntarily provide less plastic bags
- being more feasible than asking people to reduce the usage of other types of plastic bags (e.g. bags used for wrapping meat or those used for carrying flour)

PIN intends to promote the use of **polyester reusable bags** that are durable, more ecofriendly than cotton or paper bags (see below) and are likely to have a comparably good acceptance among consumers. A visual overview of different types of bags that can be reused is provided in Annex 5.7.

Table 1: The minimum number of times the following bags need to be reused in order not to have a higher 1) contribution to climate change and 2) overall environmental impact than a LDPE bag that was used in a shop and then reused as a waste bin bag.¹

type of bag	impact on climate change	overall environmental impact	
non-woven polypropylene (PP) bags	6 times	52 times	
woven polypropylene (PP) bags	5 times	45 times	
recycled polyethylene terephthalate (PET) bags	6 times	52 times	
polyester bags	2 times	35 times	
biopolymer bags	0 times	42 times	
unbleached paper bags	0 times	43 times	
conventional cotton bags	52 times	7,100 times	
organic cotton bags	149 times	20,000 times	

¹ Ministry of Environment and Food of Denmark (2018) Life Cycle Assessment of Grocery Carrier Bags, retrieved from https://www2.mst.dk/Udgiv/publications/2018/02/978-87-93614-73-4.pdf

2. RESEARCH METHODOLOGY

2.1 Research Objectives

The research had the following objectives:

- to understand the current **usage** of reusable bags
- to identify which of the 12 most important factors (see next page) prevent people from using reusable bags (the 'barriers')
- to identify which factors (might) motivate people to use reusable bags (the 'motivators')
- to come up with a set of feasible **recommendations** for refining the project's strategy

The content of the research was mainly, informed by the results of a **desk review** on existing initiatives on reducing the usage of plastic bags (in Armenia and abroad).

2.2 Research Location

The research was conducted in **urban and peri-urban areas in the towns of Goris and Kapan** in the Syunik province of Armenia. The research did not include more remote villages, primarily due to the relatively small amount of plastic bags used in these areas (as compared to urban and peri-urban areas) caused by 1) smaller volumes of shopping made in these areas and 2) local sellers frequently not providing free plastic bags.

2.3 Data Collection Methods

The research used the following data collection methods:

- observations in shops assessing the gender and age group of shops' customers and the type and number of shopping bags they used
- structured interviews with shops' customers, divided by interviews with people who use reusable bags ("Doers") and those who do not use them ("Non-Doers")
- structured interviews with shops' managers and cashiers
- semi-structured interviews with the staff of NGOs as well as local and national authorities working on plastic waste management

Observation forms as well as questionnaires for interviews with sellers were **piloted in the target areas**, and data collectors' feedback was used to refine their design. The final versions of the data collection forms are available in chapter 5: Annexes.

2.4 Sampling

The data was collected from the following participants:

- **Observations of 384 customers** (140 in the Kapan area, 244 in the Goris area) of small, medium and large shops: the data was recorded about all customers who came to the selected shops. To account for differences in the types of shopping people make, the data was collected at three different times of day. For details, see Annex 6.2.
- **In-depth interviews with 15 customers** (8 in Goris, 7 in Kapan), including both women and men, young as well as older people.
- Interviews with the cashiers and/or managers in 8 shops (8 in Kapan area, 7 in Goris area), including small ('kiosk'), medium (1 cashier) and large (2 or more cashiers) shops. For details, see Annex 6.2.
- Interviews with the staff of 2 NGOs (Clean Goris, Goris Communities Union) and 3 authorities responsible for waste management (1 in Goris, 1 in Kapan, 1 in Yerevan).

WHAT DETERMINES PEOPLE'S BEHAVIOURS?1

PERCEIVED SELF-EFFICACY

A person's belief that s/he has the confidence, knowledge, and ability required for practicing the behaviour.

PERCEIVED **SOCIAL NORMS**

A person's perception of whether the family, neighbours, or other important people will approve or disapprove of her/ him practicing the behaviour.

PERCEIVED SUSCEPTIBILITY

A person's perception of how likely it is that s/he will be affected by the problem the behaviour is addressing.

PERCEIVED POSITIVE CONSEQUENCES

What positive things does a person think will happen if s/he practices the behaviour? What will be the benefits & advantages?

ACCESS

The extent to which a person can access the products or services required to practice the behaviour.

PERCEIVED SEVERITY

A person's perception of how seriously affected s/he can be by the problem the behaviour is addressing.

PERCEIVED DIVINE WILL

A person's belief that God's and/or spirits approve of the behaviour, or are causing

PERCEIVED NEGATIVE **CONSEQUENCES**

What negative things does a person think will happen if s/he practices the behaviour? What will be the costs & disadvantages?

CUES FOR ACTION

The presence of reminders that help a person to remember to practice the behaviour or the steps involved in doing the behaviour.

PERCEIVED ACTION EFFICACY

A person's belief that doing the behaviour will address the problem.

POLICY

Local laws and regulations that affect behaviours and access to products and services.

CULTURE

The extent to which local customs, values or lifestyles influence (not) doing the behaviour.



2.5 Training of Data Collectors

Prior to the research, from the 5th to 7th of August 2019, the data collectors participated in a two and half day-long training on social and behaviour change provided by PIN's Behaviour Change Advisor. The training covered the following main topics:

- the most common and useful behaviour change theories
- common factors that influence people's behaviour
- a selection of behaviours that should be promoted
- research techniques for understanding the key barriers and motivators
- prevention of the most common mistakes made when conducting interviews
- review and finalization of drafted research methods
- research planning, logistics, division of responsibilities, etc.

2.6 Data Collection and Analysis

The data was collected in the course of four days, from the 9th to 12th of August 2019. The list of staff who participated in data collection is provided in Annex 5.6.

- Observations: The data collection staff first explained the purpose of the observations to the shop manager and asked for permission to conduct observations. If the observation was granted, the staff stood within two meters of the checkout counter and recorded the required data in a KoBo questionnaire in her/his smartphone. The collected data was analysed using basic Excel functions.
- Interviews with shop sellers and customers: At the beginning of each interview, the data collectors clearly introduced themselves, explained the purpose of the interview (in a general way only, so that it does not influence the respondents' answers), informed the respondent that the survey is anonymous and asked her/him for consent to proceed with the interview. Depending on the size of the shop, the data collectors either interviewed only the cashier or both the cashier and manager. In the case of interviews with customers, the data collectors first used a set of screening questions to determine whether the respondent is a Doer or Non-Doer (or someone who should not be interviewed at all) and then proceeded with the interviews. In both cases, the collected data was coded accordingly to its meaning.
- **Interviews with NGO and environmental authority representatives**: The interviews took place at the offices and/or plastic waste management sites of the respondents.

2.7 Research Limitations

Among the main limitations of the research were the following:

- Since before the research it was not clear who the main target group of PIN's project would be, PIN had to assess the barriers and motivators experienced by the general population of customers – not specifically by the target group that is suggested in the Recommendations section below (as this group was identified only later, based on the research findings).
- Many respondents were not familiar with more modern and attractive types of reusable bags (that will be promoted by the project) and their opinions about reusable bags were based on the types of bags that they already had experience with or on those they have seen around.
- The data on overuse of plastic bags had to rely on the data collector's judgement of whether the definition of overuse (see below) was met or not in a given case.

3. RESEARCH FINDINGS

3.1 Current Usage of Reusable Bags

Based on the observations made in selected shops, the research identified that:

- 92.73% of customers used light plastic bags only
- 4.55% of customers used their own bag and at the same time used a provided light plastic bag; and
- 2.73% of customers used their own bag only

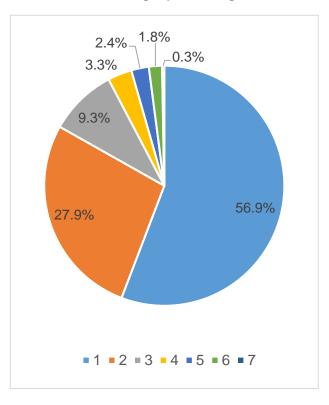
The total percentage of customers who brought and used their own bag was 7.27%. This means that while bringing and using a reusable shopping bag is a fairly uncommon practice, there is a minor segment of customers that already follow this behaviour. The data becomes more useful when disaggregated by gender and age groups:

Table 2: Customers who brought their own bag according to gender and age groups								
	< 30 years	30 - 55 years	> 55 years	all				
men + women	9.4%	5%	8%	7.3%				
men	2%	6.8%	0%	3.8%				
women	17%	3.5%	14.6%	10.4%				

Table 1 shows that women are much more likely to use a reusable bag than men. This finding correlates with the findings from interviews with customers that using reusable bags was perceived as something that can be done by women but would look 'unmanly' if done by men. Reusable bags were most likely to be used by young women, followed up by older women. On the other hand, young and older men were least likely to use a reusable bag.

As the chart on the right shows, the vast Chart 1: Number of light plastic bags taken majority of customers who used plastic bags took one or two bags only. This finding is important: if people usually took a large number of plastic bags, it would be difficult to persuade them to instead carry an equal number of reusable bags. However, carrying one or two reusable bags - a number sufficient for most shopping should be much more feasible.

The overuse of plastic bags, defined as taking a (additional) plastic bag even though not using the bag would not decrease the comfort of the customer, was observed in 22% of cases. In most cases, plastic bags were automatically given by the cashier to the customer, in a quantity the cashier perceived as necessary (the cashiers are reluctant to appear as not providing enough plastic bags, as it might be perceived as not providing good customer service). In some cases only, the customers specifically asked for more bags than they needed.



3.2 Barriers and Motivators to Using Reusable Bags

This part of the research report describes the main factors that discourage people from using reusable shopping bags (the 'barriers'), as well as the factors that encourage them to use reusable bags (the 'motivators'). The key identified barriers and motivators are listed below in order of their expected importance.

Key Barriers:

- Customers knowing that they will receive a free bag: The single most recorded barrier to customers bringing their own bag is the existing practice of cashiers (or a dedicated staff) providing free-of-charge as many plastic bags as the customer wants or needs. Indeed, one respondent asked: "Why would I bring my own bag when I can get a bag for free?" Customers became used to (i.e. it became a habit) automatically taking a free bag. Most also agreed that seller who does not automatically provide a free bag is not a good seller. However, if the bags were not for free, it would (partially) discourage people from their use only if their price was high enough (e.g. at least 50 100 AMD). From the conducted interviews it was clear that plastic bags are perceived to have a range of benefits and if the price of bags is too low, people are very likely to keep using them, as the benefits will outweigh the costs.
- Sellers not willing to limit the provision of free bags: The interviewed sellers are very reluctant to limit the provision of free bags, as they perceive it as an integral part of a good customer service. According to an interviewed seller: "You must provide a bag". Another seller highlighted how bad it is for sellers not to provide free bags: "It is unpleasant for me to see customers of other shops leaving a shop without bags, carrying their goods in their hands or wrapped in a paper." Although the sellers reported that free bags cost them substantial amounts of money (approx. 40 EUR per month in a medium size shop with one cashier), they perceive it as worth the expense: "If I do not provide free bags to customers, next time they will go to another shop and I will lose my customers". Most sellers said that if the Armenian government introduces fees or bans on the usage of light plastic bags, it will significantly decrease the number of bags used (at the same time, most interviewed sellers and cashiers were not aware of such plans). At the same time, they said that there is nothing they can do to reduce the usage of free plastic bags, adding that only the government or customers can reduce their usage.
- People re-using bags from shops at home: People frequently take free plastic bags (sometime even more than they need to carry their shopping) because they intend to use them at home. Such bags are most frequently reused for garbage, for packing food, for carrying goods, etc. Not taking any plastic bags would mean that people have to purchase new bags for trash, food, etc. which people are not likely to do (since they have no or very little incentive to do so).
- Customers thinking that they will not look good when using their own bag: Reusable bags are often associated with old-style, unattractive bags that most people do not want to use anymore. Another concern was that if people use reusable bags, they will look poor, as if they do not have the money to buy a stronger plastic bag. Men were especially reluctant to use reusable bags due to looking 'unmanly'. Reusing free plastic bags provided by the shops was widely rejected, as people said that there is no reason for this and that they would look strange if they take an old plastic bag to a shop. Existing social norms and concerns about how others will look at someone who carries her/his own bag were a major barrier to a more widespread use of reusable bags.

- Low availability of (attractive and affordable) reusable bags in the shops: Another reported barrier to a greater usage of reusable bags was their limited availability at shops. Respondents who already use reusable bags said that sometime it happens that they forget a bag or cannot use the old one anymore, but it is difficult to find attractive-looking and affordable bags in the shops in and around the towns of Goris and Kapan.
- Reusable bags perceived as less comfortable to carry: Since only a few people had experience using modern, easily foldable polyester bags (or any similar bag), reusable bags were perceived as being too large and hard to carry, decreasing people's willingness to use them.
- Reusable bags perceived as less hygienic and needing to be washed: People who do not use reusable bags perceived them as less hygienic and needing to be washed frequently (taking people's time and energy). On the other hand, this barrier was not reported by respondents who already use reusable bags. This finding likely relates to people's limited understanding of which goods can be carried without additional packaging in reusable bags. For example, people using reusable bags did not use them to carry unpacked cheese or meat, flour, and other foods that must be wrapped in plastic (or other hygienic material).
- Customers thinking that they will get a negative reaction from cashiers when using their own bag: A smaller part of respondents said that the "cashier will look strangely at me" if she/he takes out and uses her/his own bag. This might be because the number of people using their own reusable bags is still relatively low, and cashiers might not understand why someone does not take the free bags offered by their shop.

Key Motivators:

- Reusable bags are perceived as being stronger: The respondents appreciated that with reusable bags, they do not have to worry about their shopping getting damaged due to the bag getting torn. They perceived them as a more reliable carrier of the purchased goods.
- Reusable bags are partially perceived as being more eco-friendly: A part of the respondents mentioned that reusable bags are better for the environment; however, at least an equal number of respondents did not mention anything about the environmental benefits of using reusable bags. Furthermore, while some people might have a good awareness about the environmental costs of using plastic bags, it does not necessarily influence their behaviour. This can be illustrated by a respondent who during the research explained the impact plastic bags have on the natural environment, and several minutes later threw a plastic bag onto her burning stove. During the interviews, it was obvious that while environmental arguments can be a powerful motivator for environmentally conscious, primarily younger people, on their own, they might not be sufficiently strong to change the behaviours of other consumers.

It is important to explain that the fact that more benefits / motivators were not frequently mentioned is not because they would not exist, but because most people currently do not perceive them. Saving money (once a minimum price for light plastic bags is introduced), "feeling good" about doing something beneficial for the environment, appreciation of peers who approve of using reusable bags, "looking attractive" when using nice reusable bags, "being a part" of a positive trend in the society, and reusable bags being safer for children (due to the lower risk of suffocation) as well as other motivators, can — with the right social

and behaviour change interventions – increase on their prevalence and perceived importance.

4. RECOMMENDATIONS

The recommendations listed below are provided in the light of 1) the research findings and 2) the budget, duration, activities and mandate of PIN's "Reduce, Reuse" project.

Recommendation #1 – Focus activities on a more specific audience: The usage of reusable bags as opposed to free plastic bags is a relatively uncommon behaviour that faces several major barriers. When dealing with such a behaviour, it is not effective to be promoting it automatically among all the people who should ideally practice it. Instead, as explained by the Diffusions of Innovations theory, it is more effective to focus on "early adopters" who – if they adopt the behaviour – play a crucial role in influencing the behaviour of the remaining part of the population (see illustration below²). Early adopters usually have the highest degree of opinion leadership and set new trends which are then followed by the "early majority".

Considering the existing usage of reusable bags among 1) women and men and 2) different age groups, the most suitable "early adopters" are young women. Since 1 in 6 young women already uses reusable bags (considerably more than men), it is more likely that this target audience would be most open to adopting this behaviour. Therefore, PIN should agree with the donor, the British Embassy, to refine the target group from "people of both genders and all age groups" to "young women aged 18 – 35 years". This will enable PIN to tailor its behaviourchange messages and activities to a specific audience, resulting in greater effectiveness. Furthermore, it is very likely that changes in the usage of reusable bags by young women will have a spillover effect on the generation of their mothers, further increasing the project's impact.

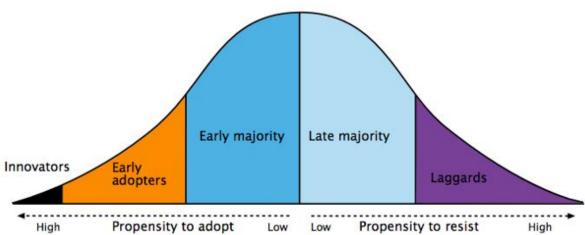


Illustration 1: Diffusion of Innovations Theory

Recommendation #2 - Do not ask people to completely stop using plastic shopping bags: PIN's communication activities should avoid creating an impression that they are asking people to stop using plastic shopping bags. Such a communication would not be meaningful (as for some purposes people simply need plastic bags) and might trigger a negative response, reducing people's openness to changing their current practices. Instead, PIN should be encouraging people to find easy ways how to reduce the amount of plastic bags used, such as by using reusable shopping bags.

² Illustration retrieved from https://timeline.com/early-adopter-laggard-24d291e9f06a

Recommendation #3 – Rebrand the perceived image of reusable bags: With the exception of (relatively few) people who are familiar with modern designs of polyester bags, reusable bags are commonly perceived as old-fashioned, bulky, unhygienic bags that most people would not likely to carry. It is crucial that PIN manages to change this negative image to reusable bags being perceived as attractive, affordable,

hygienic and easy to fold & carry bags which the target group members enjoy using (due to various reasons - see below). This "rebranding" of reusable bags is crucial for ensuring that young women want to use reusable bags and do not feel negatively judged by others. PIN therefore has to identify reliable suppliers of attractive (see examples on the right³) and affordable bags, pretest their use among potential users and then promote those types / designs of bags that young women find most attractive and affordable. Since this process might take time, it is essential that PIN starts with it very soon.



- Recommendation #4 Understand the real motivators of the target audience: It is crucial that PIN identifies which reasons are most likely to motivate young women to use reusable bags in the long-term. Such reasons might include, for example:
 - feeling good about helping the environment
 - feeling to be a part of a positive change
 - looking attractive when using a nice bag
 - gaining positive feedback from others (e.g. friends)

PIN must understand what the main desires of young women are (feeling good about herself, looking good, gaining appreciation from others ...?) and then **link the promoted behaviour (= using reusable bags) with one or more of these desires**. This will require PIN to invest an additional 2-3 days into organizing very well-facilitated focus group discussions with the target audiences. As much as possible, the project staff should also **seek the assistance (or at least advice) of a professional marketing agency** + take advantage of the methodological support provided by PIN's Behaviour Change Advisor.

- Recommendation #5 Use a mix of the most relevant communication channels: Out of all the communication channels proposed in PIN's project proposal, the following are most worth recommending:
 - **paid advertisement on Facebook**, targeting younger women living in the target areas (showing the bags' benefits and saying which shops sell them)
 - events at universities discussing with women the benefits of using reusable bags and offering them a free bag in return for posting on social media (Instagram, Facebook, etc.) a photo of them with the bag (ideally against a nice background of an attractive banner) and text saying what they like about the bag

³ Image retrieved from http://xn--dein-mbelhaus-nmb.de/produkt-schlagwort/einkaufstasche-faltbar-gros/

- promotion events in front of shops where reusable bags can be bought
- Recommendation #6 Make reusable bags available on a commercial basis: Most NGO projects distribute reusable bags with the hope that people will use them in the long-term. While this approach has its advantages (very easy to organize, people are happy to receive bags for free, etc.), it also has several major weaknesses, including:
 - **Lower perceived value**: People often value and use more things they gained using their money and/or effort as opposed to things they received for free.
 - **Potential damage to markets**: Organizations who distribute large quantities of certain materials (e.g. shopping bags) for free are likely to undermine the efforts made by shops that are trying to sell them on a commercial basis and in the long-term (i.e. being anytime available, beyond the duration of a NGO's project).

Providing reusable bags to a limited number of influencers is perfectly acceptable. However, any further efforts aiming to ensure people's long-term access to reusable bags should not be based on distributing bags for free but on supporting local shops to offer bags on a commercial, affordable basis. This can be done, for example, by offering them an "exchange" when:

- PIN provides them with contacts of suppliers of attractive and affordable reusable bags and asks them to purchase and start offering these bags in their shops; and
- in return, PIN will offer to all shops who committed to sell the bags an extensive promotion of the bags (including the names of shops where people can buy them) through social media, events attended by young women, influencers and other means

PIN should aim to collaborate with several different shops (that are sufficiently motivated and willing to take the financial risk of ordering reusable bags), to avoid being alleged of unfairly supporting a specific shop only. Considering that the original proposal anticipates the distribution of 1,000 reusable bags (which is way too many), it will be necessary to **agree with the donor on required changes**.

- Recommendation #7 Engage cashiers in encouraging the use of reusable bags: In the case that PIN identifies shops that are motivated to sell (and ideally also promote) reusable bags, it should:
 - discuss with their managers and cashiers the environmental reasons for using reusable bags; and
 - discuss with the managers the possibility of them asking the cashiers to encourage people who use reusable bags (for example, even just by treating them in a polite way or saying "it is nice that you have your own bag")

When doing so, it is recommended that you **engage the staff of the Goris municipality** into motivating the shop managers and cashier(s) to encourage the use of reusable bags.

Recommendation #8 – Discuss with MoE PIN's support to implementing fees for plastic bags: The research clearly showed that the single most effective measure for reducing the usage of light plastic bags would be to introduce a substantial fee or a ban (while offering more eco-friendly alternatives). Since the Armenian Ministry of Environment (MoE) works on introducing these measures, PIN should discuss with MoE whether there is any way how it (possibly in collaboration with other NGOs) could support this initiative. For example, by providing MoE with the required data (e.g. on the

perception of sellers and customers, their willingness to pay for plastic bags depending on various price levels, etc.) or engaging with MoE's behaviour, change communication activities.

Recommendation #9 – Ensure efficient management of the project activities: Ensuring a commercial supply of reusable bags while creating a sufficient, long-term demand is not an easy task, especially since the project has only limited duration and human resources. The management team of PIN Armenia should therefore prepare a feasible work plan, regularly (e.g. once a week) monitor the progress on its implementation, and respond quickly to any newly identified challenges. There is a number of staff that can support the Project Manager (such as PIN Armenia's Country Director, Head of Programmers or PIN's Behaviour Change Advisor or Markets Development Advisor) and it is important that the Manager uses this support to ensure efficient implementation of the project's revised strategy.

5. ANNEXES

5.1 Observations form



5.2 List of shops where observations and interviews took place



List of shops where observations and in

5.3 Questionnaire for interviews with customers and sellers



Interviews with Shops' Customers.d



Interviews with Shops' Sellers.docx

5.4 Questionnaire for interviews with NGOs



5.5 Questionnaire for interviews with relevant authorities



Interviews with Local Waste Mng Au

5.6 List of staff participating in data collection



5.7 Overview of bags that can be reused

