

AN INQUIRY ON SUSTAINABILITY AND CONSUMPTION
THROUGH SINGLE-USE DISPOSABLE PRODUCTS

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THROUGH SINGLE-USE DISPOSABLE PRODUCTS**

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ABSTRACT

AN INQUIRY ON SUSTAINABILITY AND CONSUMPTION THROUGH SINGLE-USE DISPOSABLE PRODUCTS

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The research area of this study is sustainability, material culture, and sustainable consumption, and in this context it deals with the example of single-use disposable products. This thesis aims to explore the reasons for and implications of widespread use of single-use disposable products (SUDPs) in terms of sustainable consumption; to understand the underlying patterns of and challenges for responsible consumers' experiences with SUDPs; and to investigate how responsible consumers relate themselves to these products.

The research carried out for this study is designed as qualitative, and content analysis is used as the main analysis method. Data collection is made through a survey carried out among responsible consumers on SUDPs with 191 participants from Turkey, followed by in-depth interviews with 16 people sampled among the survey participants. A similar survey was held in Japan with 160 participants, followed by a second survey held with six participants.

The findings indicate that participants consider beverage packaging, plastic bags, and food packaging to be among the most problematic SUDPs, and plastics as the most problematic SUDP material due to ecological considerations. The continuing demand for hygiene, comfort, convenience, speed and mobility serve as persuasion and pretext for using SUDPs. The study reveals the gap between value and behavior regarding environmental issues as a major problem and challenge related to SUDPs, which means that environmental values do not always reflect onto peoples' behavior. Another challenge is that participants often complain about a lack or insufficiency of alternatives for SUDPs.

The thesis concludes with suggestions of possible solutions for decreasing the use of SUDPs.

Keywords: sustainability, consumption, sustainable consumption, single-use disposable products, responsible consumer

ÖZ

TEK KULLANIMLIK KULLAN-AT ÜRÜNLER ÜZERİNDEN SÜRDÜRÜLEBİLİRLİK VE TÜKETİM İNCELEMESİ

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Bu çalışmanın araştırma alanı sürdürülebilirlik, maddi kültür ve sürdürülebilir tüketimdir; ve bu bağlamlarda tek kullanımlık kullan-at ürünler örneğini ele almaktadır. Araştırmanın amacı, tek kullanımlık kullan-at ürünlerin yaygın kullanımının sürdürülebilir tüketim açısından nedenlerini ve yansımalarını araştırmak; sorumlu kullanıcıların tek kullanımlık kullan-at ürünlerle olan deneyimlerinde davranış biçimlerini ve yaşadıkları çelişkileri anlamak; ve sorumlu kullanıcıların bu tip ürünlerle nasıl bir ilişki kurduğunu incelemektir.

Bu çalışma niteliksel araştırma olarak tasarlanmış olup, içerik analizi yöntemi kullanılmıştır. Bu çalışmadaki verinin toplanması birinci olarak, Türkiye’den 191 katılımcı ile sorumlu kullanıcılara yönelik tek kullanımlık kullan-at ürünler üzerine bir anketi içermektedir, ikinci olarak anketi cevaplayanlardan 16 katılımcı örneklem olarak seçilip, ayrıntılı görüşme gerçekleştirilmiştir. Benzer bir anket çalışması

Japonya’da da 160 katılımcı ile yürütülmüştür, ve bu çalışmayı altı kişiyle yapılan ikinci bir anket izlemiştir.

Çalışmanın sonucunda, ekolojik açıdan en çok sorunlu olarak görülen tek kullanımlık kullan-at ürünlerin içecek ambalajları, plastik poşetler ve gıda ambalajları olduğu ortaya çıkmıştır; ve en çok sorun olarak algılanan malzeme ise plastiktir. Hijyen, rahatlık, konfor, hız, ve devingenlik için devam eden talebin, tek kullanımlık kullan-at ürünlerin kullanımı için ikna aracı ve bahane olarak iş gördüğü anlaşılmıştır. Bu tez, tek kullanımlık kullan-at ürünlere ilişkin sorunların ve zorlukların önemlilerinden biri olarak çevre konularıyla ilgili değer ve davranış arasındaki boşluğu göstermiştir, bu da çevresel değerlerin kişilerin davranışlarına her zaman yansımadağı anlamına gelmektedir. Katılımcıların sıklıkla ifade ettikleri bir diğer zorluk ise tek kullanımlık kullan-at ürünlerin alternatiflerinin eksikliği ya da yetersizliğidir.

Tek kullanımlık kullan-at ürünlerin kullanımının azaltılmasına yönelik olası çözüm önerileri ile çalışma sonuçlanmaktadır.

Anahtar Kelimeler: sürdürülebilirlik, tüketim, sürdürülebilir tüketim, tek kullanımlık kullan-at ürünler, sorumlu kullanıcı

to my brother ‘Zoytingk’ Oytun Özer

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TABLE OF CONTENTS

ABSTRACT	v
ÖZ	vii
ACKNOWLEDGMENTS	x
TABLE OF CONTENTS	xii
LIST OF TABLES.....	xx
LIST OF FIGURES	xxii
CHAPTERS	
1. INTRODUCTION	1
1.1 Background of the Thesis	2
1.1.1 Significance of the Subject	2
1.1.2 Sustainability –Call for a Systemic Change	4
1.1.3 Dilemma of Sustainable Growth and Sustainable Development.....	5
1.2 Aim of the Study	6
1.3 Terminology of Responsible Consumers and Sustainable Consumption	7
1.4 Research Questions	8
1.5 Scope of the Thesis	8
1.6 Contribution of the Thesis to the Field	9
1.7 Structure of the Thesis	9
2. MATERIAL CULTURE, CONSUMPTION AND SUSTAINABILITY	11
2.1 Consumer Culture	11
2.1.1 Discussion of Consumption in Relation to Sustainability	12

2.1.2 Obsolescence	14
2.1.3 Greenwashing	15
2.1.4 Post-consumerism.....	16
2.1.5 Green Consumption, Green Consumers and Green Products.....	17
2.2 Social Movements in Relation to Sustainable Living	19
2.2.1 Ecovillages.....	19
2.2.2 Voluntary Simplicity	20
2.2.3 Slow Living	21
2.3 Notions of Material Culture, Everyday Life, and Lifestyles	22
2.3.1 Hygiene, Comfort, Convenience, Speed, and Mobility	22
2.3.2 Everyday life and Lifestyles	26
3. SUSTAINABILITY AND DESIGN.....	29
3.1 Sustainability -Seen as Utopian.....	29
3.2 Technological Fix	30
3.3 The Role of Design and Designer	31
3.4 Current Approaches of Sustainable Design.....	34
3.4.1 Product-oriented Approaches	34
3.4.1.1 Eco-Design Strategies	34
3.4.1.2 Design-based Research	35
3.4.1.3 Ephemeral Objects	35
3.4.1.4 Dissident Design	35
3.4.1.5 Integrated Scales of Design and Production	36
3.4.1.6 Responsible Consumption.....	36
3.4.2 Systems Approaches.....	38
3.4.2.1 Slow Design	38

3.4.2.2 Cradle to Cradle	38
3.5 The Case of Single Use Disposable Products	40
4. RESEARCH METHODOLOGY	51
4.1 Research Methodology	51
4.2 Stage 1: Survey in Turkey.....	53
4.2.1 Sampling for the Survey	54
4.2.2 Representativeness of the Chosen Sample as Responsible Consumers.....	54
4.2.3 Conduct of Survey	54
4.2.4 Grouping the Open-ended Replies	56
4.3 Stage 2: Semi-structured In-depth Interviews.....	57
4.3.1 Sampling for the Interviews	57
4.3.2 Conduct of Interviews	58
4.4 Stage 3: Survey in Japan	61
4.4.1 The Purpose and Reasons of the Study in Japan	62
4.4.2 Research Methodology of Field Study in Japan	63
4.4.3 Sampling for the Survey in Japan.....	64
4.4.4 Conduct of Survey I.....	64
4.4.4.1 Translation of the Data.....	66
4.4.4.2 Questions Added Specially for Japan	66
4.4.5 Conduct of Survey II	67
5. STAGE 1: SURVEY IN TURKEY	69
5.1 Findings of Survey in Turkey	69
5.1.1 News and Publications	70
5.1.2 Associations, Institutions, Foundations, Movements, Collectives, Societies, Networks, Groups or Organizations	72

5.1.3 Courses, Trainings, Workshops, Conferences or Trips	73
5.1.4 SUDPs that are Used in General.....	74
5.1.5 SDUPs that are Used Most in Amount	77
5.1.6 SUDPs that are Encountered Most in Amount	78
5.1.7 SUDPs that are Re-used.....	79
5.1.8 SUDPs that are Kept and Cannot be Thrown Away.....	80
5.1.9 Types of Carriage Bags	81
5.1.10 SUDPs that are Found the Most Important.....	82
5.1.11 SUDPs that are Found the Most Problematical	82
5.1.12 Problems with SUDPs	84
5.1.13 Reasons of SUDPs for Being Widely Used.....	85
5.1.14 Reasons for Using or Not Using the SUDPs, and Alternatives that are Used	86
5.2 Summary Results of the Survey in Turkey.....	89
5.2.1 Food and Beverage	91
5.2.2 Carrying / Transport	95
5.2.3 Cleaning, Care	97
5.2.4 Medical	100
5.2.5 Others.....	100
6. STAGE 2: INTERVIEW STUDY	103
6.1 Use Patterns of SUDPs.....	106
6.1.1 Locations and Situations of Using SUDPs	106
6.1.1.1 Locations of Using SUDPs	106
6.1.1.2 Situations of Using SUDPs	106
6.1.2 Indispensable / Rejected / Avoided or Reduced SUDPs	108
6.1.2.1 Indispensable SUDPs and Reasoning	108

6.1.2.2 Rejected / Avoided SUDPs	109
6.1.2.3 Could be Rejected / Given up SUDPs	110
6.1.2.4 Reduced SUDPs.....	110
6.1.3 Preferences about Packaging for the case of SUDPs.....	111
6.1.3.1 Not Much Affected from Packaging Properties.....	111
6.1.3.2 Preferred Types of Packaging Properties.....	112
6.1.3.3 Types of Packaging that are not Preferred and Reasoning	116
6.1.3.4 Preferred Unpackaged or not Pre-packaged.....	117
6.1.4 Alternatives of SUDPs	119
6.1.4.1 Alternative Products for SUDPs and Reasoning.....	119
6.1.4.2 Lack of Alternative Products or Alternative Usages for SUDPs	122
6.1.4.3 Reasoning for Not Using Alternative Products for SUDPs	125
6.1.5 After Initial Use of SUDPs.....	127
6.1.5.1 Re-use of SUDPs	128
6.1.5.2 Keeping SUDPs	135
6.2 Properties of SUDPs	142
6.2.1 Positive Properties of SUDPs	142
6.2.1.1 Hygiene.....	142
6.2.1.2 Convenience.....	144
6.2.1.3 Comfort.....	145
6.2.1.4 Practicality	146
6.2.1.5 Speed.....	147
6.2.1.6 Mobility	149
6.2.1.7 Accessibility.....	149
6.2.1.8 Spontaneity	150

6.2.2 Negative Properties of SUDPs.....	150
6.2.2.1 Being Uncomfortable with / Disturbed from SUDPs.....	152
6.2.2.2 Debatable (Seemingly Positive) Properties of SUDPs.....	153
7. STAGE 3: SURVEY IN JAPAN	159
7.1 Survey Findings in Japan.....	159
7.1.1 Checking Participants for Environmental Commitment and Behavior	159
7.1.1.1 News and Publications in Japan.....	159
7.1.1.2 Associations, Institutions, Foundations, Movements, Collectives, Societies, Networks, Groups or Organizations in Japan	160
7.1.1.3 Courses, Trainings, Workshops, Conferences or Trips in Japan.....	161
7.1.2 Use Patterns of SUDPs	162
7.1.2.1 SUDPs that are Used in General	162
7.1.2.2 SUDPs that are Used Most in Amount	163
7.1.2.3 SUDPs that are Re-used.....	164
7.1.2.4 SUDPs that are Kept and Cannot be Thrown Away	166
7.1.2.5 Types of Carriage Bags.....	167
7.1.2.6 SUDPs that are Found the Most Important.....	168
7.1.2.7 SUDPs that are Found the Most Problematical.....	169
7.1.2.8 Problems with SUDPs.....	170
7.1.2.9 Reasons of SUDPs for Being Widely Used	172
7.1.2.10 Use of Furoshiki.....	174
7.1.2.11 Use of Waribashi.....	175
7.1.2.12 Use of Bento.....	177
7.1.2.13 Locations and Situations of Using SUDPs.....	179
7.1.2.14 Perceiving SUDPs as Indispensable.....	180
7.1.3 Properties of SUDPs.....	181

7.1.3.1 Hygiene.....	181
7.1.3.2 Convenience.....	181
7.1.3.3 Comfort.....	182
7.1.3.4 Speed.....	182
7.1.3.5 Mobility	183
7.2 Summary Results of Survey Findings in Japan	183
8. CONCLUSION.....	187
8.1 Discussions of the Field Studies	188
8.1.1 Factors Affecting the Use of SUDPs.....	188
8.1.2 Hygiene, Comfort, Convenience, Speed, and Mobility.....	190
8.1.3 Patterns of Use and Influence of Changing Habits.....	191
8.2 Comparison of Turkey and Japan	192
8.3 Research Questions Revisited.....	196
8.3.1 Challenges and Problems Regarding SUDPs	197
8.3.1.1 Lack or Insufficiency of Alternatives of SUDPs	199
8.3.1.2 Gap between Practice and Ideology.....	200
8.3.1.3 Societal rather than Individual	202
8.3.1.4 Perception of Indispensability.....	202
8.3.1.5 Invisibility	203
8.3.1.6 Distance	203
8.3.2 Reasons of the Widespread Use of SUDPs	204
8.4 Suggestions for Solutions.....	205
8.5 Contribution of this Study.....	207
8.6 Limitations of the Study.....	208
8.7 Recommendations for Further Research.....	209

REFERENCES.....	211
APPENDICES.....	229
A. LIST OF ENVIRONMENTAL GROUPS IN TURKEY.....	229
B. SURVEY (TURKEY).....	231
C. ONLINE SURVEY SCREENSHOTS (TURKEY).....	237
D. SURVEY (TURKEY) ENGLISH TRANSLATION	238
E. INTERVIEW GUIDELINE (TURKEY)	244
F. INTERVIEW GUIDELINE (TURKEY) ENGLISH TRANSLATION	248
G. QUOTATIONS FROM INTERVIEW (IN TURKISH).....	252
H. SURVEY I (JAPAN).....	259
I. SURVEY I (JAPAN) ENGLISH TRANSLATION	268
J. SURVEY II (JAPAN).....	276
K. SURVEY II (JAPAN) ENGLISH TRANSLATION	278
L. ABSTRACT IN JAPANESE	280
CURRICULUM VITAE	282

LIST OF TABLES

TABLES

Table 4.1 The Stages of the Research	52
Table 4.2 Age Distribution for the Participants of Survey in Turkey	56
Table 4.3 List of Interview Participants	59
Table 4.4 Age Distribution for the Participants of Survey in Japan	65
Table 4.5 List of disposable products versus traditional re-usable alternatives in Japan	67
Table 5.1 Sources News and Publications	71
Table 5.2 Associations, Institutions, Foundations, Movements, Collectives, Societies, Networks, Groups or Organizations	72
Table 5.3 Courses, Trainings, Workshops, and Conferences or Trips Attended or Participated	73
Table 5.4 SUDPs are used in general (Open-ended Question 7)	74
Table 5.5 SUDPs that are used most in amount.	77
Table 5.6 SUDPs encountered most in amount	79
Table 5.7 SUDPs re-use.....	80
Table 5.8 SUDPs that are kept and cannot be thrown away.....	81
Table 5.9 Carriage bags that are used	81
Table 5.10 SUDPs found the most important.....	82
Table 5.11 SUDPs found the most problematical	83
Table 5.12 Problems with SUDPs	85

Table 5.13 Reasons of SUDPs being widely used	85
Table 5.14 Classification of SUDPs made by the participants	90
Table 6.1 Questions asked in the Interview Phase I	103
Table 6.2 Questions asked in the Interview Phase II	104
Table 6.3 The Themes of findings of the Interviews	105
Table 6.4 Alternative products for SUDPs that are not used, and reasons for not using	127
Table 7.1 Sources of News and Publications in Japan.....	160
Table 7.2 Associations, Institutions, Foundations, Movements, Collectives, Societies, Networks, Groups or Organizations in Japan	161
Table 7.3 Courses, Trainings, Workshops, and Conferences or Trips Attended or Participated in Japan	162
Table 7.4 SUDPs are used.....	163
Table 7.5 SUDPs that are used most in amount.....	164
Table 7.6 SUDPs re-used	165
Table 7.7 SUDPs that are kept and not thrown away	167
Table 7.8 Carriage bags that are used	167
Table 7.9 SUDPs found the most important	168
Table 7.10 SUDPs found the most problematical	169
Table 7.11 Problems with SUDPs.....	170
Table 7.12 Reasons of SUDPs being widely used	172
Table 7.13 The Use of Furoshiki.....	174
Table 7.14 The Use of Waribashi	176
Table 7.15 S The Use of Bento	178

LIST OF FIGURES

FIGURES

Figure 3.1 “Potato Candlestick” as an example for ‘Ephemeral Design’ by Stuart Walker (2006, 174).....	36
Figure 3.2 “Red Dots on Drinking Glasses” as a part of “Continuity in Diversity” project by Anne Marchand (2008, 107).....	38
Figure 3.3 Total MSW by category, 250 million tons (before recycling) (EPA 2010)	41
Figure 3.4 Plastic Disposable Cups for Feeding Premature Newborn (Photograph by the author. 18.08.2014).....	43
Figure 3.5 Screenshot of ReThink Disposable Facebook Group 2016	45
Figure 3.6 UGER Re-usable Menstrual Pads as a part of “Safe Menstrual Health” Campaign (Jatan Sansthan Website 2016)	46
Figure 3.7 UGER Re-usable Pads (Murthy 2015b).....	46
Figure 3.8 Leaf Republic Plate (Leaf Republic Website 2017).....	47
Figure 5.1 SUDPs that are used in general (Multiple-choice Question 20.a).....	76
Figure 5.2 SUDPs that are used most in amount (Multiple-choice Question 20.b)	78
Figure 5.3 SUDPs found the most problematic (multiple-choice Question 20.c)	84
Figure 5.4 SUDPs that participants chose to explain the reasons why they use or do not use, and the alternatives to SUDPs	86
Figure 5.5 SUDPs for which reasons are given for using.....	87
Figure 5.6 SUDPs for which reasons are given for not using	88
Figure 5.7 SUDPs for which alternatives that are used instead.....	89

Figure 5.8 Classification according to functions of SUDPs	91
Figure 6.1 A Package example from a small farm that is sensitive about packaging. This handmade example consists of a glass jar; the lid is reinforced with paper tape, and wrapped with a paper bag. (Photograph by the author. 27.01.2016 Ankara, Turkey).....	113
Figure 6.2 The Tetra Pak milk package that has a glass bottle image printed on. (Photographs by the author. 26.08.2011 Ankara, Turkey).....	117
Figure 6.3 The Sunpride glass fruit juice bottle (ETSM Website)	129
Figure 6.4 Re-used plastic yogurt containers (Photograph by the author. 19.06.2011 İstanbul, Turkey).....	131
Figure 6.5 Re-used plastic containers of Kinder Surprise chocolate (Photograph by the author. 27.08.2011 Ankara, Turkey).....	132
Figure 6.6 Lami branded pen box (Photograph by the author. 27.08.2011 Ankara, Turkey).....	137
Figure 7.1 An Example of re-use of PET bottle (Photograph by JP22, 23.12.2014, Fukuoka Japan)	166
Figure 7.2 An Example of Furoshiki (Japanese traditional wrapping cloth) used in daily life (Photograph by the author. 14.05.2012 Fukuoka, Japan)	175
Figure 7.3 An Example of My-Hashi (re-usable chopsticks) in its plastic case, used in daily life (Photograph by the author. 22.08.2012 Fukuoka, Japan)	176
Figure 7.4 An Example of Bento (re-usable lunch box), prepared at home for picnic (Photograph by the author. 14.04.2012 Fukuoka, Japan)	178
Figure 7.5 An Example of Bento, My-hashhi and Furoshiki use, for lunch at workplace (Photograph by JP153, 10.09.2014, Fukuoka Japan)	179
Figure 8.1 The most re-used SUDPs in Japan and Turkey	191
Figure 8.2 The most important SUDPs in Japan and Turkey	192
Figure 8.3 The most problematical SUDPs in Japan and Turkey	193
Figure 8.4 An Example for drinking water fountain in Middle East Technical University campus in Ankara, Turkey (Middle East Technical University Website)	204

Figure 8.5 Public Water Drinking Fountain in International Narita Airport (Photograph by the author. 10.04.2012 Tokyo, Japan).....	204
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CHAPTER 1

INTRODUCTION

In recent years, researchers have become increasingly interested in sustainability issues. The notion of sustainability has become prevalent and “diluted by its overuse, lack of a solid definition, and irresponsible application” (Pilloton 2009, 15). According to her, these current years can be counted as ‘sustainability 1.0’. She suggests that coming years would be ‘sustainability 2.0’, if the social aspects of sustainability would be brought up to the similar level comparing to the environmental ones, by moving away from a “green-only” understanding (Pilloton 2009). Besides, Parr introduces his book *Hijacking Sustainability* with a criticism of transforming meaning of sustainability into the area of ‘popular culture’, with the increasing interest in sustainable life (2009). The definition of ‘sustainable development’ given in the 1987 report from the Brundtland Commission of the UN World Commission on Environment and Development is as follows: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (The United Nations 1987, 41). According to Griggs et al, this definition should be redefined as “development that meets the needs of the present while safeguarding Earth’s life-support system, on which the welfare of current and future generations depends” (2013, 306).

Among the accelerating connotations of sustainability, this study focuses on the multifaceted issues of it as they relate to consumption, design, and material culture with a particular emphasis on short-lived products; and aims to examine the relationship among aforementioned disciplines.

1.1 Background of the Thesis

1.1.1 Significance of the Subject

Environmental problems nowadays are more than just pollution or running out of resources. On this issue, Şahin states: “Climate change is acknowledged as an externality in the language of economics, and it is accepted as an avoidable and cleanable pollution issue. In fact, climate change is totally a result of the way of human’s intervention to the nature” [Author’s translation from Turkish] (2009, 293). In addition, Žizek argues that the ecological problems are never only about nature and environment, as they are parts of social and political whole. He claims that commonsensical analysis which asserts that, regardless of political choices and class, people should all deal with the environmental catastrophe for survival is profoundly deceptive; since “the key to the ecological crisis does not reside in ecology as such” (2010, 334). Likewise in the environmental discussions Shove (2003) indicates a lack of confronting with the questions of how modern needs are evolved, which results in inclusion within the criticized consumer culture.

As Flavin (2010) emphasizes, cultural roots of the environmental problems should not be ignored, since they are among the most important aspects. He continues that consumerism set in well into many cultures worldwide and it becomes an influential motivation for unstoppable hunger for more resource and waste production distinctive to current era (2010, xvii).

Unsustainability of people’s lifestyles is significantly related to the economic system they live in. Wood puts forward that considering the current economic system, economic growth and profit are greatly taken for granted, and seen as absolute markers for success. Still, he is hopeful that “many people are now beginning to notice how fragmented, dysfunctional, alienated, and disconnected our society has become” (Wood 2007, 12).

On the governmental regulations regarding the environment, McDonough and Braungart assert that "a regulation is a signal of design failure. In fact, it is what we call a license to harm: a permit issued by a government to an industry so that it may dispense sickness, destruction, and death at an *acceptable* rate" (2002, 61). In a similar manner, Dawson (2006) claims that governments have failed to deal with the environmental problems in a systematic way. So, this has led many people to infer that the direction of majority is deeply faulty and that "it cannot be reformed from within but must, rather, be transcended from without" (Dawson 2006, 17). Additionally, Wood (2007) claims that governments are still reactive rather than visionary. Although there have been some recent improvements such as solar panels and bicycle roads, he criticizes the politics of being "competitive, growth-orientated, and out of touch with the eco-system" (2007, 1), and continues to argue that the current notion of political discourse seems to have no grasp of events beyond the short-term rationale of economic concerns. Similarly, Hay (2005) believes that depending only on the legislations and technology is insufficient, and he states that people need to discover a pathway for personal development for responsibility aligned with sustainable consumption. Accordingly, it is inferred that relying primarily on the corrective measures of legal precautions would be deficient or too slow for solving the overarching ecological problems.

Despite the importance and the urgency, the topic of this study is still quite under-researched; Fisher's (2008) thesis on "Disposable hot beverage cups" can be named as one of the few studies on this topic. Another study is from Pedgley (1995), about disposable products and obsolescence with a product design perspective. Yet, no study has been identified that looks in the subject of disposable products from the perspective of contemporary consumption patterns. A novel approach to sustainable consumption is intended, by looking at attitudes, values, and behaviors of responsible consumers, through the understanding of reasons of the widespread consumption of disposables.

1.1.2 Sustainability –Call for a Systemic Change

As Martell suggests, sustainability calls for not only the technological requirements about energy and production, but also “restrictions on growth, resource extraction and pollution, and implies radically changed social lifestyles and values, whether taken on by choice or necessity” (1994, 47). Likewise, to reach the transition towards sustainable life, people will have to learn to live with less by founding novel social activities both at global and local levels (Manzini et al. 2008, 259). The implications of transition towards sustainability require reconciliation with different forms of *systemic discontinuity*, even though we are not accustomed to envisioning (Manzini et al. 2008, 259). To achieve this transformation, according to Manzini et al. “macro-transformations, is done by micro-transformations, i.e. by the radical innovations introduced into local systems” (2008, 260).

In Worldwatch Institute’s *The State of the World 2010* book Assadourian calls for “one of the greatest cultural shifts imaginable: from cultures of consumerism to cultures of sustainability” (2010, 3). The book goes beyond the standard instructions for improved environmental policies for governments and clean technologies, and provides insights into the cultural transformation towards sustainability; which would contribute to the people’s way of thinking and actions. The book demands for reevaluation of the consumer culture’s basis. Consumerism manifests with practices and values considered as ‘natural,’ that inconsistently challenge nature and endanger wealth of human being (Yunus 2010, xv-xvi). Similarly, Assadourian emphasizes the need for a radical transformation from culture of consumption to culture of sustainability: “preventing the collapse of human civilization requires nothing less than a **wholesale transformation** [emphasis added] of dominant cultural patterns” (2010, 3). According to him, this change should involve rejection of consumerism, and a novel cultural structure should be established in its place based on sustainability instead.

1.1.3 Dilemma of Sustainable Growth and Sustainable Development

McDonough and Braungart (2002) observe that people make a distinction between the types of growth: growth of nature is recognized as “beautiful and healthy”, whereas industrial growth is challenged due to ravenous resource use and degeneration of environment and culture. They add that “urban and industrial growth is often referred to as cancer, a thing that grows for its own sake and not for the sake of the organism it inhabits” (McDonough and Braungart 2002, 77). The authors refer to “good growth” by giving examples from nature as being abundant, nurturing and healthy (McDonough and Braungart 2002, 78). However, the term ‘growth’ in economics mostly refers to unlimited growth. Since the current conception of growth is incompatible with sustainability, the concept of ‘sustainable growth’ is contradictory in itself. Sustainability can only be attained without the obsession of unlimited growth. Daly states “the term ‘sustainable development’ is used as a synonym for the oxymoronic *sustainable growth*” (1993, 268), and adds that people mislead themselves into supposing that growth is still enviable and probable. Labeling things as *green* or *sustainable* would only hinder the unavoidable change and cause the change to become more agonizing (1993, 268). Others also indicate their serious concerns on growth:

If we want to achieve a true transformation, as humankind, we should reexamine our relations with the earth and our vision of the world, our economical philosophy. If we continue to ask for more and keep on growing, how many more solar panels will you lay on the land? How many wind turbines will you place on the mountains? These might be solutions for today, but unless we do not alter our understanding of economy or do not revise our relationship with the earth, we will destroy the nature even more. [Author’s translation] (Özesmi 2009, 286)

Wood (2007) warns about how misleading the ideation might be when the prime concern is economic; he asserts that the supporters of genetically modified organisms claim that there is not sufficient land to feed the world, and the energy industry calls for devoting a considerable portion of arable land for crops to produce bio-fuels. He believes that this recklessness is an outcome of the mindset created by the restricted attitude of gross domestic product (GDP), the idea of growth and blindly trusting in nature that it would stay eternally generous, no matter how we act

(2007, 23). Thus, for a more sustainable system, “we must first take the conceptual and political step of abandoning the thought-stopping slogan of ‘sustainable growth’” (Daly 1993, 272).

Besides, sustainable **degrowth** is defined as cutback of production and consumption in order to contribute to the wellbeing of earth and people (Research & Degrowth Website 2017). It aims for socio-technical planning which allows conviviality and frugality, with a shrinking economy letting cooperation within people and ecosystems.

As a result, the term ‘sustainable growth’ will not be referred to, throughout this study; instead ‘sustainability’ as a more general and all-embracing terminology is employed.

1.2 Aim of the Study

Keleş et al. (2015) draw attention to the cruciality of asking the essential questions. For instance, problematic of waste interacts with and includes a compound of problems related to ecology, which are embedded in socio-political and cultural structures. Therefore, only discussing the symptoms of waste does not essentially and meaningfully answer the problem area.

The aim of this thesis is to examine the use patterns of single-use disposable products (SUDPs¹), and to explore the reasons of prevalent use, in order to pave way to question the existing structures of consumption.

¹ **SUDPs** as abbreviation for “single-use disposable products” is used thereafter in this study.

1.3 Terminology of Responsible Consumers and Sustainable Consumption

Throughout this study, the term ‘responsible consumer’ is utilized for depicting the people who can be considered as being sensitive towards sustainability issues. The difference in usage between ‘sustainable consumption’ and ‘responsible consumption’ is described by Marchand (2008) in her thesis as follows: the term ‘sustainable consumption’ is generally employed by ‘top-down’ authorities, namely the lexicon of formal, whereas ‘responsible consumption’ is more favored by the public, associations and groups. To define the people with high sensitivity, the latter is more appropriate for the position of this study. Responsible consumer in this study though, represents not only people who buy, consume, and re-cycle certain products, but also who have certain attitudes towards using or buying less, re-using, or thinking on alternatives.

While, in Turkish ‘*çevreci*’ (the exact translation of *environmentalist*) is often used to depict the people mentioned above, there are no common separate expressions for responsible or sustainable consumer.

The recruitment criteria to select the proper participants for the field study, who would represent responsible consumers, are explained in Section 4.2.

The terminology of ‘sustainable consumption’ sounds in fact oxymoronic, since meanings of consumption contain destruction, spending, or wasting away. Therefore, not all connotations of consumption seem to comply with sustainability. For this, one of the suggested alternative terminologies is *co-production* to define a more active and conscious consumption, including participation of the processes, especially in the areas of food production and permaculture. However, co-production does not cover all the meanings of use, whether it might be active or conscious or neither. Consequently, in this thesis sustainable consumption as a general term is employed, with the intention of referring to inclusive neutral meanings of consumption, which are ‘use and utilization’.

1.4 Research Questions

This study examines and responds to the following questions: The core question is:

What are the **attitudes, values, patterns of experiences, behaviors, and challenges** of responsible consumers towards using SUDPs?

The sub question of the research is:

What are the reasons for and implications of widespread use of SUDPs in terms of sustainable consumption?

1.5 Scope of the Thesis

The research area of this study is sustainability, sustainable consumption, and material culture with a particular emphasis on products with short life spans (e.g. SUDPs). This class of products is selected to do research on, since nowadays they are one of the most apparent examples of unsustainable practices in daily life. Despite many drawbacks, their production and consumption continue in an accelerating manner. Most importantly, their relationship with people is so normalized, brief, and at times shallow that, not enough time and effort is given to evaluate and criticize them. Habitual everyday use possibly leaves them unrecognized or they have become invisible. Therefore, they might easily be underestimated and escape from examination.

The key concepts, which are attributed to contemporary products like hygiene, comfort, convenience, speed, mobility, etc., are discussed, within the framework of how disposable products connote these keywords. As elements of everyday lives, these keywords are questioned and examined, especially their attributed benefits and contributions to the so-called quality of life. This study attempts to make a contribution towards a sustainable future by exploring and discussing material culture and consumption through these key concepts attributed to designed objects, exemplifying how SUDPs have grown to be so embedded in everyday life globally.

The research findings are not focused specifically on how design activities would or should change, but on finding out about how people's attitudes, values, behaviors, practices change and transform. The research findings target the scholars who are interested in sustainability in general. As an interdisciplinary approach, this study stands at the intersection of sustainability studies, design theory, cultural studies, and sociological studies. In order to serve the aims of the study, it includes field research comprised of surveys and interviews with responsible consumers.

1.6 Contribution of the Thesis to the Field

The contribution of the study is expected to be a new understanding of people's attitudes and values towards artifacts; by this way, understanding the basic reasons of structures behind these attitudes and values, which would pave the way to more sustainable possibilities. This research would also help evaluating and evolving current sustainable design conceptions and understandings for sustainability. The questions and challenges of ecological problems cannot be answered solely within the design discipline. The expectation of the author is that the inquiry and questioning the amount and range of SUDPs would result in awareness, thus it would lead to a new sustainable design approach.

1.7 Structure of the Thesis

Following the introduction in this chapter, the literature review in Chapter 2 and Chapter 3 covers various issues of sustainability, material culture, consumption, and sustainable design. Firstly, Chapter 2 comprises of subject matters of consumer culture, consumption connected with sustainability, examples of social movements for sustainable living, and discussion of everyday life and lifestyles within material culture. Connected with sustainability, consumer culture discussions contain issues such as obsolescence, greenwashing, post-consumerism, and green consumption. Secondly, Chapter 3 discovers and presents the literature of sustainability in relation

to the design discipline, examples of sustainable design approaches, and lastly the case of disposable products in relation to sustainability.

Chapter 4 covers the research methodology of the study conducted for this thesis and the research steps are explained in detail. Then, it is followed by the stages of field studies, which are described in Chapters 5, 6, and 7. Chapter 5 presents extensively the results and analysis of surveys conducted in Turkey. In chapter 6, there are comprehensive results and analysis of interviews conducted in Turkey. Chapter 7 contains detailed results and analysis of surveys conducted in Japan.

And lastly, Chapter 8 comprises discussions on the findings and makes concluding remarks, by answering the research questions and comparing two different countries. It also includes the limitations of this study and recommendations for future studies.

CHAPTER 2

MATERIAL CULTURE, CONSUMPTION AND SUSTAINABILITY

2.1 Consumer Culture

Culture can be defined with the “elements—values, beliefs, customs, traditions, symbols, norms, and institutions—combining to create the overarching frames that shape how humans perceive reality” (Assadourian 2010, 7). As for the concept of consumption, according to Dobers and Strannegard (2005) it is a process of social and cultural relations, which become prominent with its outcomes such as alienation, isolation and individualization in a society; instead of a cognitive single act. Objects and practices of everyday life are often taken for granted. As Assadourian (2010) discusses, nowadays consumerism becomes so embedded in culture that it appears natural; therefore, it is not easily distinguished as a cultural construction. Indeed, actually for Assadourian “the elements of cultures—language and symbols, norms and traditions, values and institutions—have been profoundly transformed by consumerism in societies around the world” (2010, 8). He claims that many societies appropriate consumerism, so it becomes somewhat “self-perpetuating” (2010, 10). Therefore, the supposed permanency of consumerism leads to that all the institutions of society persist to base upon this direction, according to Assadourian.

2.1.1 Discussion of Consumption in Relation to Sustainability

Among production, consumption, waste, and depletion, Dobson (2007) gives priority for the discussion of consumption, since for him the other terms are founded on the existence and continuation of consumption.

Efforts for sustainability should go hand in hand with the aspiration and belief for extensive social and cultural change; as Flavin states, “while consumerism remains powerful and entrenched, it cannot possibly prove as durable as most people assume” (2010, xix). Assadourian (2010) believes that understanding the role of these institutional drivers is essential in cultivating new cultures of sustainability. New consumer goods and services are continuously increasing their market by the help of these institutions. Today’s business system is mainly based on an increasing growth along with consumption taking advantage of people’s desires rather than addressing their needs. This creates a significant obstacle for sustainability according to Dobers and Strannegard (2005). Thus, it is argued that consumption trends and lifestyles need to be transformed, considering the arguments on existing norms of corporate environmental management (Dobers and Strannegard 2005).

Even though Miller (2006) argues that environmental critiques focus more on the destructive effects of production, currently there are a number of researches specifically on consumption in the sustainability discourse (Jackson, 2006). Jackson explains that the idea of ‘sustainable consumption’ has rooted from the opinion that unsustainability had to be upturned. He describes the goal as plainly reaching “patterns of consumption that are *not unsustainable* in the way that previous patterns of consumption have been” (2006, 4).

For Southerton it is important to comprehend “how consumer culture is differentially organised, transmitted, appropriated and resisted in different societies” for the discovery of means that would promote the ways of new sustainable patterns for consumption (Sustainable Consumer Behaviours Website 2010). Similarly, Jackson states that sustainable consumption should better be comprehended and

appraised “in the context of much older and deeper debates about consumption, consumer behavior and consumerism itself” (2006, 2). Badke and Walker (2007) indicate that environmental degradation is a symptom of the social nature of consumerism, and therefore the solutions that are suggested must include an understanding of this social dimension. Hence, social aspects of sustainability cannot be ignored and should be incorporated into any kind of endeavor related to sustainability and consumption. Cultures and values of people, political and economical systems they live in, are counted as the social issues to consider.

As an integral part of production and consumption cycles, design field should be evaluated in the discussion of consumption. There are approaches emphasizing that existing socio-economical system is inevitable, therefore disciplines such as design should act accordingly. Chapman and Gant (2007) argue that both developed and yet developing countries would plainly continue consuming, so unavoidable reality should be admitted, and the role of the designer turns out to be apparent. They claim that if developed countries demand for sustainable goods, then it would become a source of motivation for producers to manufacture more; which points out supply-demand formula. They assert “if the right changes are to be made, -after all, *sustainable consumption* is only really achievable when there are sustainable products and services for us to *consume*” (2007, 141). Nevertheless, this approach of supply and demand, or production and consumption duals appears to be superficial. Designing, producing, and therefore consuming more sustainable things will not alone create a basis for sustainability. The danger is that this kind of simplistic view might result in generating the opposite effect rather than the desired one. For Wilby (2008), it would backlash: even environmentalist efforts would turn to benefit for *supercapitalism*, people are encouraged to buy a new appliance continuously, since compared to the previous one that would be more energy-efficient. Thus, without structural changes in the areas of politics, culture, and economics, only making and consuming more so-called sustainable products and services (e.g. more environmentally efficient products) would not be sufficient in order to transform the current unsustainable conduct.

2.1.2 Obsolescence

In order to understand the process of consumption culture, obsolescence should be explicated. Obsolescence means that products become useless because of various reasons: categorized by different types, namely technological, planned, and perceived (psychological).

Technological obsolescence, which can be described as technological advance requiring a replacement, such as the telephone replacing the telegraph, is more obvious compared to other kinds.

For Cooper (2005), **planned obsolescence** is intentional restriction of a product's use time, forced by either requirement of cutting costs, or convenience of disposable products, or demands of fashion. He notes that, in Britain, it is found out that one-third of the discarded appliances were actually still functional. Leonard (2010a) puts it as: the goods that are intentionally discarded as rapidly as possible, then replaced. Planned obsolescence is illustrated in the documentary film "The Light Bulb Conspiracy" (Dannoritzer 2010) as an evident choice of the producers, not a necessity or limitation. It is remarkable to confront that, as early as 1932 the pamphlet titled *Ending the Depression through Planned Obsolescence* was published, Bernard London highlights the necessity of planned obsolescence, and its reason as:

Modern technology and the whole adventure of applying creative science to business have so tremendously increased the productivity of our factories and our fields that the essential economic problem has become one of organizing buyers rather than of stimulating producers (London 1932).

London discusses how in the earlier period of prosperity, "the American people did not wait until the last possible bit of use had been extracted from every commodity" (1932). It signals a change in values. Strikingly, it is seen that the seeds of today's culture were sowed at those years: "new products would constantly be pouring forth from the factories and marketplaces, to take the place of the obsolete, and the wheels of industry would be kept going" (London 1932).

Perceived obsolescence also called ‘psychological obsolescence’ or ‘obsolescence of desirability’, means providing an “incentive to toss an older model, even if it is still working just fine” (Leonard 2010a, 208). So that a product is perceived as become obsolete (Simon 2010).

For McDonough and Braungart (2002), in the early industrialization period, most of the old durables were been maintained, got repaired or sold to a scrap dealer; however, currently people just throw them away. Nowadays, it seems unreasonable to try to get a toaster repaired, according to them, since finding local repair service is more difficult than buying a new one. According to them “**throwaway** [emphasis added] products have become the norm” (2002, 97).

Cooper proposes that a thorough comprehension of consumer values and attitudes is needed “to understand how people might reduce their desire to acquire more possessions and, instead, increase their attachment to those that they currently own” (2005, 63-64). As an example, the outcome of a research on identifying the disadvantages of buying longer-lasting appliances reveals that, “more respondents were deterred by a fear that such items would become ‘out of date’ (30%) than by price (23%)” (Cooper 2005, 60).

Consequently, a better understanding of the people’s attitudes and values related to consumption and sustainability is required in terms of product obsolescence. Particularly, planned and perceived obsolescence are accounted as among the major challenges for sustainable consumption. Since people are convinced to throw away even fully functional products, it becomes almost inevitable that people are persuaded to discard the ‘throw-away’ products. After all, they *by nature* require to be treated this way.

2.1.3 Greenwashing

Pilloton defines greenwashing as the attempts of corporations or organizations in taking “environmentally friendly actions that are usually half-hearted attempts done

to garner media attention” (2009, 15). Cerit Mazlum likewise, states for Turkey that “since 1980’s, this has been one of the products of capitalism associating itself to environmental concerns -process of getting a green image, seen as green” [Author’s translation] (2009). The danger of ‘greenwashing’ is that it can create a false perception of sustainability, so it may cause to slow down the process of genuine changes towards sustainable living. The examples of greenwashing present how small and incremental improvements in the name of sustainability might backfire, instead of helping the process of becoming more sustainable. For instance, recycling has been used as a tool to make products seem less harmful, and better the image of producers as greener. Leonard (2010a) puts forward that recycling keeps people misled into a feeling of doing the right thing for the planet; and according to her, this helps the industry to become free to maintain spreading out more toxic materials. Besides, in her book *Green Gone Wrong*, Rogers observes in her trips to several places representing the green businesses all over the world; and she concludes that current practices of so-called environmental enterprises are mostly “like camouflage to enable ongoing destructive practices” (2010a, 186). Rogers informs that eco-labels could conceal continuing disparaging practices, that she gives many examples in her book, such as biofuel production (2010a, 12), and warns about not to accept by default that “any food labeled organic is good for the earth” (2010a, 180).

2.1.4 Post-consumerism

Riley (2001) is optimistic about the new consumer: “the transcendent themes of new consumers emerge from their experience as the progeny of the Consumer Age.” For him, this new type of consumers are in charge of their own future by managing their prospects, and they are alarmed about the heritage of unreasonably extreme consumerism belonging to the prior generation. He envisions that the essence of the evolving new consumerism is to transform “the focus of desire from something we can never satiate to something we can” (Riley 2001).

Suggesting *alternative hedonism* Soper (2009) claims that she does not propose an archaic or nostalgic way of life, going back to rural type of living; but a new kind of understanding that can be called **post-consumerism**. Soper argues that pleasures of good life should not come only at the expense of human misery and ecological degradation. According to her, there might be several different views on pleasure and right living, but it is agreeable that “refined and complex pleasures will be grounded in the simpler satisfaction that comes through the elimination of suffering and exploitation” of resources and employment (Soper 2000, 130). Walker also indicates that “the notion of post-consumerism resonates with much contemporary thinking about products and sustainability, where it is referred to by terms such as systemic shift, radical change, or post-materialism” (2010, 10). These current redefinitions of consumerism reveal that there is already a transformation taking place towards a new paradigm.

2.1.5 Green Consumption, Green Consumers and Green Products

About the current situation of green consumption, Schendler mentions the results of the business researches that “it’s not that greenness is becoming more important to the consumer- it’s that greenness is becoming part of a normal marketing tableau” (2009, 237).

On the other hand, Dobson (2007) thinks that green turns into the color of capitalist venture. In the book titled *Living Green*, Horn (2006) declares that he is finding out ways of living more sustainably, while wholly partaking in the consumer economy. He continues:

Every single plastic bottle of water we refuse to buy, every chemical we choose not to spray on our lawns or gardens, and for every organic apple or chicken or every energy-saving appliance we buy, we are creating change. (Horn 2006, 26)

This attitude, indeed, might lead to an illusion of change, instead of an actual one. Even if green products are made for the sake of change, the critical and underlying issue is whether they would pave the way to a transformation of mindset or not. Since, a change in the way of thinking is imperative, not least than a deep

transformation would help to alter the unsustainable ways of living. Otherwise, the so-called green products might lead to a clear conscience and satisfaction, causing reconciliation with the existing situation. For Cerit Mazlum (2008), it can be said that 'life style' type of environmentalism is only adopted as an inclination towards following a trend, not a change in way of living as a conclusion of a questioning. Badke and Walker (2004) explain green products as claiming to suggest an option of less harmful for nature than standard counterparts, such as outdoor furniture out of recycled plastic material. According to the authors (2004), they are rather in a 'superficial' impression, letting consuming without tackling multi-sided issues of sustainability. They criticize those products of becoming excuse for consuming, and let consumers believe that they give less harm to nature; therefore, consume at ease. This actually incorporates customers into consumer cycle even more (Badke and Walker 2004). Likewise, Rogers defines the attitude of "armchair activism" which is realized mainly by consuming greener goods (2010, 4). Rogers (2010) believes that this approach implies people could alleviate environmental degradation, without changing their lifestyles, just by the help of consuming the right things.

The problem with green consumers is according to Whiteley that most people would not realize the association between the individual level and the macro level, they would not accept that it is the "**social, economic and political system of consumerism** [emphasis added]" should be entirely converted, if sustainability is to be attained (1993, 53). For Maniates, the idea commonly held by many people is that the attitude of 'plant a tree, save the world' seems to be "apolitical and nonconfrontational" (2002, 66), therefore it should lead to success. However, for him (2002), this kind of attitude operates for limiting peoples' horizons on what would be worthy for effort and what is achievable. For Maniates, one of the "myths and misperceptions" about sustainability issues is that "every little thing helps" (2016, 142). He observes that, by defending this, "saving the planet becomes a lifestyle choice rather than a political act". Though, this conception is indeed misleading as it implies that "we can all be productive agents of change without

engaging difficult political struggle” (2016, 142). Thus, he sees this misconception as an obstacle against hopes for sustainable futures.

As a result, a change in the consumption without a mindset transformation is a shallow one, and superficial change will only cause to domesticate the so-called green products, appropriate them within the current economical system; which would only serve to shade the ecological problems or postpone them at the best.

2.2 Social Movements in Relation to Sustainable Living

Various approaches and social movements appear to be alternatives towards sustainable living and sustainable consumption such as ecovillages, voluntary simplicity, and slow living, “all of which, in different ways, encourage and support sustainable values” (Marchand 2008, 31). As environmental consciousness rises, new pursuits of living and change in value system appear alongside. Attfield explains that sustainability awareness is not only in regard to environmental ethics that came forward after the oil crisis in 1970s, namely the comprehension of natural resources are being depleted; but also related to the appreciation of the possibility which would happen by abandoning the existing values and consumerism with transforming life practices more austere and modest, which is currently called “downshifting” (Attfield 2000, 246).

The following are exemplifying the groups of people, i.e. associations, institutions, foundations, movements, collectives, societies, networks, or organizations; which are related to the endeavors for living sustainably.

2.2.1 Ecovillages

Ecovillages are initiatives of endeavor and devotion of small groups of people, usually in rural areas (Dawson 2006). There are many different ecovillages, but they can be generally defined as a community aiming to be inoffensively incorporated into nature by maintaining and nourishing individuals’ development, through

forming a socially fair, peaceful, and sustainable neighborhood (Lucas 2006, 9). People who gather in these premises generally share their lives with the intention to build a community based on their collective goals, such as living harmoniously with nature.

The Global Ecovillage Network (GEN) works for connecting and encouraging sustainable communities (The Global Ecovillage Network website 2010). Among many others (either a member of GEN or not) there are thousands of ecovillages or ecovillage initiatives all around the world, namely: Findhorn in Scotland, Sieben Linden in Germany, Auroville in India, Crystal Waters in Australia, and Kibbutz Lotan in Israel (Dawson 2006). Even though in small scale, they set good examples of sustainable living through their settlements and living practices. Various activities are taking place in ecovillages: practices of permaculture and natural building, or educations on these issues.

2.2.2 Voluntary Simplicity

Voluntary simplicity -also known as *simple living*- is defined as: efforts to enhance life by reducing the damaging effects of people's lives to nature and human-made settings (Marchand 2008, 32). It is "a practice, a philosophy, and a method of social change that can help transform consumer cultures by helping people understand that *less is more*" (Andrews and Urbanska 2010, 184). The idea of the voluntary simplicity is both consuming less and creating a new society through inspiring and motivating people, and evoking connection to get them participated in the social change towards sustainability (Andrews and Urbanska 2010). There are groups of people around the world interested in and opting for voluntary simplicity, who are active in organizations, mailing lists or in online forums (Marchand 2008). People, who intend to implement voluntary simplicity as a lifestyle, try to consume less, choose more ecological options for products or services, and opt for reducing the working hours.

2.2.3 Slow Living

Slow food is an international movement initiated in 1980s, encourages ‘regional and seasonal’ food, which is engaged to conserving time-honored local cuisine and claims the rights for high value gastronomy (Leimgruber 2006, 13). The reason behind the commencement of such a movement is the reaction for rising fashion of instant, mobile, and more standardized food which is deficient of exclusive local tastes (Leimgruber 2006). Slow food inspires other practices such as slow living, slow consumption, slow cities, and slow design.

As to the production and consumption velocity, Cooper argues that the technological improvements (e.g. energy efficient products) will not be enough by themselves and “there is a need to slow the rate at which raw materials are transformed into products and eventually discarded” (2005, 54).

Slow living is urged with reaction to the “flux and speed” of current western life; it means that understanding temporality in an alternative way and using time with awareness in order to engage life practices with pleasure or purpose (Parkins and Craig 2006). It does not simply indicate the slower version of the existent lifestyles. Slow living for Parkins and Craig “has a potential to become an alternative mode within the contemporary everyday life”, which is consistent with the movements of voluntary simplicity and slow food (2006, 2). Parkins and Craig (2006) give the revival of farmers markets in Western countries as an example for slow living practices. Still, rather than set of activities, according to the authors, idea of slow living is more of a means of “cultivating an ethical approach to everyday life” (2006, 139).

To sum up, not extensive, but various examples of social initiations related to sustainable living efforts are summarized in order to remind the possibilities and preferences for exiting the highly criticized ways of life and consumption.

2.3 Notions of Material Culture, Everyday Life, and Lifestyles

Material culture is defined as an inquiry into the meanings and use of objects (in the context of this study, artifacts), the relationship between objects and people. For a comprehension of artifacts, it is essential to grasp the elements and actions of everyday life and artifacts' place in contemporary lifestyles.

In order to understand the meanings of the artifacts and activities that surround them, values attached to them should be analyzed. As Maldonado asserts, “the system of values and norms that today is at the heart of all modern ways of considering objects” (1998, 251).

2.3.1 Hygiene, Comfort, Convenience, Speed, and Mobility

A group of significant key concepts in material culture, which are often attributed to contemporary products, can be counted as hygiene, comfort, convenience, speed, and mobility. They are frequently being uttered as catchphrases of modern design, referred to as instruments to explain design contribution. In this sense, they seem binding and essential for legitimizing benefits of the artifacts or novelty in design (together with other contributions). Therefore, a thorough understanding of these concepts within the material culture discourse would introduce fresh insights into sustainable consumption and sustainable design. In the field study of this thesis, when the ideas on these keywords were asked to the people who can be considered as responsible consumers, the keywords mentioned are uttered as the reasons for using SUDPs (This issue is discussed comprehensively in Section 6.2.1).

For Shove (2003), a trend of increase in demand has been found for the levels of cleanliness, comfort, and convenience. So, in the sustainability perspective, it is significant to understand the reasons, since they would require more resources, water, energy, etc.

Hygiene discussed here is understood in a loose personal and everyday sense, not in a professional one. The terms hygiene and cleanliness are often used

interchangeably, therefore the subject of hygiene in this study includes the case of cleanliness. The understanding of hygiene in this context is a variable that reflects people's current values, not an absolute medical fact.

Meaning of **comfort** has shifted to more of physical or mental well-being and is defined somewhere between “necessity and luxury” (Shove 2003, 24). ‘Normal’ conditions of comfort are so accepted that they have become taken for granted (Shove 2003). For Maldonado (1998), comfort is a modern concept.

For the issues of cleanliness and comfort, Shove (2003) argues that there are no permanent standards; the definition of normal (for regarding the levels of cleanliness, comfort, and convenience) has been changed just within one generation. She predicts that in the future the practices would decrease the need for the resource use more than existing ones. She sees the actual peril in what would become standard, since there is a convergence of people's understandings of normal ways of life; not that the services would be transformed (since they already keep evolving continuously). For Shove, environmentally conscious people should endeavor for provoking several different meanings of comfort and cleanliness “rather than promoting energy and resource-efficient versions of products and technologies that inadvertently sustain unsustainable concepts of service” (2003, 199).

In this study, meaning of **convenience** is quite close to comfort: convenience and comfort together imply benefits of artifacts that are ease of use, ease of carrying, etc. Everyday experiences such as eating and drinking, would provide prolific grounds for discussing the key concepts in this argument. One of the instances is the takeaway food, Wild claims that it indicates “fast and furious modern lifestyle”, with all of the benefits and drawbacks, as a requirement or complete convenience, and as a “socioenvironmental and aesthetic phenomenon” (2006, 4).

Papanek warns in his book *the Green Imperative* that the term convenience is utilized as a means to market goods, and “the end-user must analyze this so-called convenience” (1995, 160). For that reason, the concept of convenience should also

be evaluated and questioned as a trap, as well as a contribution or a positive attribute.

For Shove (2003, 173) there is a strong relation between convenience and speed. The value assigned to convenience is contingent upon the perception of people on how busy they define themselves, how they are in a hurry; not dependent to durations of shopping, working or home. Therefore, it is more of an idea of ‘being busy’, not about having time for certain activities that people define for themselves and sometimes complain about. For the place of convenience is in this perception; obviously hectic lifestyle is used as an excuse for demanding more products that serve convenience in this sense.

Speed discussions are closely related to the arguments in slow living (above in Section 2.2.3). Speed in the context of this case mostly implies fast speed or hasty tempo of contemporary mode of life. Leimgruber (2006, 7) argues that rhythms of people were transformed after industrial development, and the work speed was amplified. Tempo is set by the machines, and a novel understanding of time becomes popular. Porritt (2005) stresses on the link between consumption and the global economy; with the help of today’s increasingly sophisticated communication and information technologies, the contemporary model of progress leads people to search for **the faster**, the newer and the better. He argues that “speed may itself be as much the enemy of a sustainable future as the reckless consumption that powers our global economy” (2005, 44). Likewise, Thackara (2005) claims the rewards of technology are making products faster, newer, smarter, and cheaper. In accord, Mau states that the twentieth century has marked with the search for and the test of the limits of speed, and he adds that “everything from the countertop blender to the Concorde to CNN is measured by its velocity” (2005, 497). Humphery (2013) warns that the discussions of time and speed (related to consumption) mostly focus on the acceleration of consumption; however, redefinitions of time with practices of consumption and waste of time when consuming should also be considered, so it is understood that this issue is not a simple duality of slow and fast, but it includes everything in between.

In summary, the drastic change on the pace of life and the perception of time and speed certainly has major reflections on how people live, produce, and consume, so the kinds of products they consume.

Modern appliances have been rationalized by the attributions of **time-saving** and labor-saving, and their facilitation of everyday life, as they relieve work load by saving time, however at the same time, they make higher standards achievable. So, “the time saved was spent on doing the same job, or other jobs, more often or better” (Forty 1992, 210-211). The definitions and standards of the tasks done with products are continuously transforming over the very reason of the existence of these products. Forty argues that “the invention of the washing machine has meant more washing, of the vacuum cleaner more cleaning” (1992, 211).

Mobility in general is the ability of travelling people and goods (together with the streams of information and money). Mobility in this study means the capacity of being portable, mostly for the artifacts and their contribution to people. One relevant example is again takeaway food: Leimgruber puts forward that diverse forms of takeaway food represent manifestation of eating necessities of people which are “**mobile, flexible** [emphasis added], and geared to consumption” (2006, 14). For Thackara (2005), modern mobility becomes unsustainable since it can only exist in a perpetually growing system.

To sum up, these keywords -hygiene, convenience, comfort, speed, and mobility- attach positive attributes to SUDPs such as beneficial and good. SUDPs are gaining acceptance thanks to these qualities; namely, the contribution of SUDPs are explained with these. When it comes to disposable cups and cutlery for instance, instead of an attempt and effort to produce them from biodegradable plastics, the use of them should be questioned, rethought, and redefined in the first place. The so-called need has evolved through the formation of lifestyles. Thus, trying to make these single-use items more sustainable would be futile, if this does not lead to a questioning of their role in everyday life as relates to hygiene, convenience,

comfort, speed, mobility, etc. The more crucial question for this study is how they are normalized and become widespread in contemporary everyday life.

For throwing things away after use, according to Parr, to sort and throw away stuff does not indicate that they are essentially worthless; on the contrary, the action “is a performance of U.S. identity –contemporary, stylish, clean, competitive, and upwardly mobile” (2009, 104).

2.3.2 Everyday life and Lifestyles

Lifestyle is identified by Press and Cooper as “distinctive mode of living” or as “the reflection of life values in a preferred style of consumption” (2003, 27). As for Chaney, he defines lifestyles in the modern societies as “patterns of action [...] in everyday interaction” (1996, 4). Lifestyle for him (1996, 5) is a collection of “practices and attitudes” which is meaningful on specific context.

Since 1990s, research on consumption mostly gave prominence to issues such as freedom, choice, lifestyles, taste, identity, and image (Gronow and Warde 2001). On the other hand, the field of mundane everyday consumption activities such as “food consumption, use of water and electricity, organization of domestic interiors and listening to radio” has been largely excluded from research (Gronow and Warde 2001, 3-4). For Shove too (2003), most of the literature on consumption basically deals with obtaining objects, it is important to study on usage patterns in everyday life. Because of over-familiarity, these daily practices might easily elude from the research interest, and are possibly not being comprehended as significant. Similarly, when we look at quotidian consumption habits, as short-lived products, SUDPs are mixed up in ordinary everyday practices, and due to acquaintance, can possibly escape from recognition. Beneficially, *everyday* becomes a subject of interest currently “both in public discourse and social practice” (Parkins and Craig 2006, 2; Shove and Warde 2003). Studying “invisible forms of practice” is crucial in order to understand “the constitution of normality and the dynamics of **habit** and **routine**” [emphasis added] (Shove 2003, 1). It is essential to concentrate on the ways of life

and practices, since consumption of goods, services, and resources is not for people's "own sake but as part of the routine reproduction of what they take to be normal ways of life" (Shove 2006, 302).

As an example, in the study on home appliances such as air conditioners, washing machines, and refrigerators, Shove (2006) observes that the attempt is mostly on increasing energy efficiency. Nevertheless, those efforts do not contribute questioning of "the institutionalization of lifestyles that depend upon standardized indoor environments, the maintenance of which is inevitably resource intensive" (Shove 2006, 296). Solely focusing on progress in efficiency, policy makers would lose the vision for "the cumulative consequences of changing conventions of everyday life" (Shove 2006, 301). Therefore, it is important that ordinary actions of everyday routines and consumption surrounding these activities should be taken into consideration, prior to any exploration of better technological solutions (This issue is further discussed in Section 3.2 under the heading of Technological Fix).

This study aims to question, and challenge the current lifestyles, since preservation of existing current lifestyles at all costs, which might become in service of keeping the current socio-economic system, would be considered as one of the sources of the recent unsustainable practices. That is why, mundane artifacts as habitual elements of lifestyles should be examined with their dimensions of attributed benefits for and contributions to the so-called *quality of life*. However, the definitions of quality of life are also apt to change after all. Seeing that SUDPs are frequently approved and supported with their input to quality of life, it is significant and urgent to understand how and why plastic bags and PET bottles prevail today's everyday life.

CHAPTER 3

SUSTAINABILITY AND DESIGN

3.1 Sustainability -Seen as Utopian

Goals of sustainability are widely seen as utopian and unattainable. For Wood (2007) the idea of utopias not only judged by being ‘unrealistic’ or ‘idealized’, it is also seen as having a hint of revolutionary aspiration. Within this century, the idea of revolution is frequently conceived as risky and impossible. This conception might prevent us having a deeper understanding of sustainability, and generating alternatives accordingly (Wood 2007). For him, people prefer one thing over another or complain about products as “voters and consumers” (2007, 12); and he adds that people overlook imagining their actual desires. For Mau ‘massive change’ is not futuristic since it is already happening, even though it would be perceived as utopian at first sight, it is clearly optimistic (2004, 19). Therefore, utopian or not, it is important to give effort for visions of creative people or citizens.

Chapman and Gant argue that “designing in a sustainable way is a proactive engagement with the issues, rather than a fanciful dance within an overly optimistic utopia of non-consumption” (2007, 7-8). However, presenting two counter choices: either “designing in a sustainable way and become engaged with the issues proactively” or “a fanciful dance within an overly optimistic utopia of non-consumption”, falls short of acknowledging that other alternatives might exist. This is a logical fallacy called ‘false dilemma’, as Newall (2005) explains:

characteristically it includes posing a question and suggesting only two options for respond, in fact there are more than two. Hence, the utopian character of sustainability does not necessarily refer to non-consumption; and excessive optimism cannot be an automatic attribution to this notion. Therefore, the various possibilities of sustainable futures whether they appear as utopian or not, cannot be refuted without extensive examination of options.

On the other hand, Bookchin (1982) sees utopian thinking as unavoidable, and it is not possible to tolerate ecological destruction anymore without utopias according to him.

3.2 Technological Fix

When a decision is made to cope with the symptoms of a problem, it is generally assumed that the corrective measures will solve the problem itself. They seldom do. [...] These countermeasures are all based on too narrow a definition of what is wrong. [...] A true solution can never come about in this way. (Fukuoka 1978, 79)

For solving environmental issues, commonly *technological fix* type solutions are proposed (Soper 2009). According to Hay, a new path is required at the present time and a technologically oriented approach is unsafe and challenging for successful worldwide realization; since, it does not explore what are the origins of the environmental predicaments, the value core of the decisions made and the ethics beneath them (2005, 311). He dwells on the idea that the technological fix supporters defend short term responses. For the supporters, nature has instrumental value, the goal is always stepping forward, and small incremental improvements are supposed to be sufficient (2005, 312-314). However, the ecological crisis would not be properly addressed, unless the cultural causes of the crisis are well understood. The values inherent in the dominant paradigm by which people comprehend the world should be inquired. Otherwise, sustainability project would be destined to fail (Hay 2005). As for Şişman (2005, 29), to build a sustainable life, plain adjustments within the system are not sufficient; there should be more of this: the desired alternative directions towards sustainability would be developed through focusing

on the relationships between objects and people, according to him (2005). Furthermore, as Walker defends, the model of step by step development for products ends up with producing more items, and consuming more resources and energy (2008, 5). These models –which are obviously unhelpful– strengthen the problems rather than confronting them (Walker 2008, 5). Incremental product improvements do not effectively address the problems regarding consumption; on the contrary, this incremental approach further supports it. They might help improving partially, however they do not entirely solve destructive ways of production, according to Walker (2008, 6).

Dobson (2007) puts a clear distinction between environmentalist and ecologist views that: environmentalists trust technology would solve the challenges that it produces without considering economical and political reasons of these problems, whereas ecologists -as an ideology- believe in a total societal change. However, he warns that criticizing technological fix potentially been misunderstood as anti-technology, and a desire to go back to pre-technological stage.

As a result, even if one is extremely optimistic about technological advance for the future, the ethical dimensions of sustainability and environmental concerns cannot be ignored just because various high technology solutions will be or have been introduced. Responsibilities will not simply disappear, once there is a dramatic advancement in technology. On the contrary, every new technology requires further caution and scrutiny, as in the example of nuclear power.

3.3 The Role of Design and Designer

Several societal commentators present design as a solution and hope for the countless problems of environmental degradation. For Dobers and Strannegard (2005), promoting design as an answer brings ideological, cultural, and political concerns. In a broader context, the role of design, the design process and the relation between design and consumption are needed to be critically examined related to sustainability (Dobers and Strannegard 2005).

Margolin (1998) criticizes the designers' practice of being confined within the boundaries of consumerism, except from Fuller, Papanek, and few others. He recognizes that designers are usually contented with minor achievements such as green products, which relies on eagerness of producers (1998, 86). For him (1998) since a major redefinition has not been made for design conduct with the intention of becoming an essential part of sustainability culture, novel ways of design conduct are not present yet. However, as he points out, industrial design practice should be reconsidered so as to confront the extensive problems of humanity. He argues that design should be free from consumer culture as its main determining factor, and should search for a ground to reevaluate its role in the world (Margolin 1998, 89). Badke and Walker (2004) discuss the fact that designer's practice is in service of legitimizing the consumer choice, hoping that attachment through product longevity or functionality would lessen the burden of consumption. For them, designers who are more inclined towards aesthetic values, endeavor for creating emotional relations with the expectation of building a long-term connection between product and the user. The assumption is that this approach would help limiting consumption, via planned 'sentimental value'. As for the designers who give priority to function, they consider robustness and usability, with the conviction that, building sound designs would also contribute to restricting consumption; worthy stuff will elongate use time. Nevertheless, in the end, designers are appointed in order to rationalize buying new things one way or another (Badke and Walker 2004).

Architect McLennan believes as makers of the built environment, they should have considerable portion of the liability in reshaping the spaces that people utilize to live in a more sustainable manner, since "many of the solutions to our environmental problems are design problems" (2004, xxvi). Likewise, a significant role is ascribed to design and designers by Press and Cooper, for them: design is starting to recognize the prospective as an agent that has 'responsibility for change', which has been implied since the last century. Future designers would have to discover methods to improve "design's sense of radical mission" for dealing with the vital troubles of our world (Press and Cooper 2003, 9).

Many authors put design and the designer at the very central position through the current sustainability discussions. As an example, for Chapman and Gant (2007), designers by now act to revise and handle present methods for reaching preferred prospects. In this regard, sustainable design is especially proper in the framework of design efforts serving everyday life. Therefore, designers according to them are located at the core of the sustainability discussions. They continue in the same way: “new paradigms must be created, fuelled by the underlying ecological predicament, orchestrated by the designer who sits at the heart of a network of all stakeholders” (Chapman and Gant 2007, 143). Similarly, Towers (2006) argues that for transforming the envisioning of the world, design should and would make a significant contribution. He believes that design possesses the ability to discover and enlighten intricate structures and facilitates change, by producing scenarios and constructing different potentials.

In *Slow Design*, Fuad-Luke suggests in his manifesto, among other points, “sustainable slow designer will design to: promote Design for Sustainability as an opportunity not a threat to the status quo” (Fuad-Luke 2004, 18). According to him, sustainable design would infuse in through the system. Pilloton (2009) brings her perspective to the role of design as a *catalyst* for individuals, societies, and countries. In her point of view, design is able to convey further value, and design should increase impact, instead of motivation, action, and reaction (2009, 23).

Although there are different approaches for the role for the design and designer for this issue, Wildhagen argues that designers essentially always respond to the problems of sustainability as “the issue is overwhelming” (1995, 30). He maintains that only a small number of designers are able to acquire theoretical and ethical stance design-wise, in response to these problems (1995, 31).

According to Towers: “environmental degradation and unsustainable consumer culture cannot be addressed through transformations of design practice alone” (2006, 3). He suggests that in the same way, a major shift in design paradigm detached from the material culture of daily life seems invalid. Both directions

should be realized in a complementary manner (Towers 2006). In short, equally design and people's relationship with the world should transform in a parallel way. Many of the suggested solutions for sustainability are not influenced by design alone, but mainly by broad setting of the framework; which commonly relies on the continuation of the present situation in control, namely *status quo* (Şişman 2005, 29). Consequently, understanding sustainable design as a *sterile* subject, which is disinfected and detached from other determinants, focusing on design and production of products and services solely in an isolated way would cause to ignore the broader picture.

3.4 Current Approaches of Sustainable Design

There are a variety of approaches for sustainable design, which are grouped into two: product-oriented and systems-oriented approaches.

3.4.1 Product-oriented Approaches

3.4.1.1 Eco-Design Strategies

Eco-design strategies are exemplified and categorized by Fuad-Luke according to the following product stages:

- 1) Pre-production phase (such as, ecological materials, biodegradable plastics; re-use, reduce, recycle; anti-fashion; anti-obsolescence, etc.)
- 2) Manufacturing / Making / Fabrication (such as bio-manufacturing; clean production; close-loop recycling / production, etc.)
- 3) Distribution / Transportation phase (such as fat-pack products; self-assembly, etc.)
- 4) Functionality and use phase (such as community ownership; zero emissions; design for maintenance; energy conservation / efficient / neutral; human-powered products; remanufacture, etc.)
- 5) Disposal / End-of-life (such as product take-back; remanufacture, etc.)
- 6) Other strategies such as certification of products (such as eco-labels etc.) (2004, 324-328).

However, when designing for ecological concern, designers should be very cautious about supposedly eco-environmental friendly materials or production techniques,

since they could cause bigger problems than they intend to solve in the first place; such as new materials. Several bioplastics actually are a part of the cause for worldwide food shortage, as they use large land earlier used to cultivate food for people (Vidal 2008; Tönük 2016).

3.4.1.2 Design-based Research

The design-based research constructs conceptual objects. These objects are regarded as artifacts that are not for profit, and particularly designed in order to discover and communicate ideas (Walker et al. 2008, 482). These are not solutions in themselves, but are offered as new alternative directions for design and sustainability, which is continuously evolving.

3.4.1.3 Ephemeral Objects

Ephemeral objects are an example for the design-based research, and they function as means for criticism to material culture by enabling the visibility of discarded objects and transforming them into different objects. Walker (2008) defines ephemeral design as a way of signifying well-known and undesired artifacts, thus they can be re-used and reconsidered. On any account, novel technologies can be used for allowing functioning parts of a worn out product, in order to rediscover utility, so design incorporates the old and the new; also connects current large scale production with the advantages of reduce and re-use. In addition, objects are made appropriate for local varieties and local needs. One example of ephemeral design from Walker is in Figure 3.1.

3.4.1.4 Dissident Design

Dissident design conception is for engaging both designer and consumer “in a critical discussion about consumer culture and sustainability” (Badke and Walker 2004). They suggest designed objects as tools for challenging consumerism and for creating opportunities for dialog around these objects (Badke and Walker 2004).



Figure 3.1 “Potato Candlestick” as an example for ‘Ephemeral Design’ by Stuart Walker (2006, 174).

3.4.1.5 Integrated Scales of Design and Production

Various design-based research studies are conducted at the graduate level at Faculty of Environmental Design, University of Calgary. One of them is ‘Integrated scales of design and production (ISDPS)’, defined as “re-integrates localization into design” through exploratory designs (Doğan 2007, iii). It offers responses including upgrading, repairing, recovering the products or re-using them (Doğan 2007, 6).

3.4.1.6 Responsible Consumption

The responsible consumption approach supports people towards more sustainable consumption, which aims to understand and encourage design for self-sufficiency (Marchand 2008). Derived from her design-based doctoral dissertation, Marchand

proposes the following conclusions and insights into product design and sustainable consumption:

- Design longer lasting products
- Design to be updatable, for example by physical modularity
- The viability of local re-design and re-use facilities, as well as long-lasting products
- More personal time and less stress, should be given greater consideration in the development of solutions
- Designer should critically review its role and responsibilities in the production of aesthetic norms and conventions that could be characterized as rather unsustainable. (2008, 131-132)

Marchand conducted in-depth interviews with environmentally conscious groups in Montreal, Canada. Based on her field research findings, she also developed a new design concept, namely “family of products”. She defines this concept as: creating family of items with a touch of modification for generating a shared expression (2008, 104). Figure 3.2 shows an instance for family of products, as a part of her project called “Continuity in Diversity”.



Figure 3.2 “Red Dots on Drinking Glasses” as a part of “Continuity in Diversity” project by Anne Marchand (2008, 107).

3.4.2 Systems Approaches

3.4.2.1 Slow Design

Inspired from slow food, slow cities and slow living (in Section 2.2.3), slow design is formulated by Fuad-Luke as “a paradigm for living sustainably” (2004). Slow design concentrates on concepts of welfare, and it proposes both minor and major contributions to daily life (Fuad-Luke 2004).

3.4.2.2 Cradle to Cradle

McDonough and Braungart in their *Cradle to Cradle* approach, declare that “being less bad is no good” (2002, 45-46). This statement is appropriate for the philosophical background of a systemic approach for sustainability. For them, even though efficiency of manufacturing and other procedures is increased, products are possibly continue to be basically *ill-designed* (2002, 76). The authors’ concept of eco-effectiveness has a focus “on the right products and services and systems, instead of making the wrong things less bad” (2002, 76).

They describe two kinds of material flows: “biological and technical nutrients” (2002, 93). They define biological nutrients as being valuable for nature, whereas technical nutrients are beneficial for technological courses and structures. So far industry has been organized disregarding both nutrients (McDonough and Braungart 2002). Based on that, they describe two cycles to metabolize these nutrients: the biological metabolism and technical metabolism (2002, 104). They emphasize the importance of processing these two different nutrients separately from each other, in order to recover and re-use these nutrients easily. McDonough and Braungart see the necessity of broadening the definition of design when there is a need for designing the infrastructure all together: there is a major development in how a car is defined as an archetype: it will not end up in a junk pile. Nevertheless, it is still what is called a car. Imagined as separately, cars seem pleasurable, indeed they are parts of traffic problems, and vastly increasing asphalt (2002, 178). So, it is needed

to force design challenge more: proposing a novel infrastructure for transport (McDonough and Braungart 2002, 179). They define *eco-efficiency* as ‘doing more with less’, and argue that it will alter the existing manufacturing system which is sacrificing resources for production, into a system that is incorporating matters related to economy, environment, and ethics (2002, 51).

When looking into the recycling processes, McDonough and Braungart define *downcycling* different from recycle: for them, today’s recycling means downcycling as exemplified with the process of recycling steel; paints and plastic coatings are included, so they are also mixed in, adding unsafe chemicals. Furnace for recycling steel for construction currently causes dioxin which is a strange consequence for allegedly environment-friendly process (McDonough and Braungart 2002, 57). They criticize the use of recycled materials in the name of ecological sensitivity:

The creative use of downcycled materials for new products can be misguided, despite good intentions. For example, people may feel they are making ecologically sound choice by buying and wearing clothing made of fibers from recycled plastic bottles. But the fibers from plastic bottles contain toxins such as antimony, catalytic residues, ultraviolet stabilizers, plasticizers, and antioxidants, which were never designed to lie next to human skin. (McDonough and Braungart 2002, 58)

McDonough and Braungart (2002, 59) continue uttering that, just recycling does not necessarily make something benevolent to nature, if it is not planned to be recycled properly. Bluntly implementing shallow ecological methods would be worse than doing anything. Therefore, it is important to execute a fundamentally considerate approach from the very beginning of the process, not just fixing problems whenever they are confronted.

McDonough and Braungart’s other argument is that there is nothing wrong to consume, that it is natural, by referring to the abundance in nature, referring to the example of abundance of a cherry tree (2002, 78-79). However, this approach is rather identified by trying to erase the guilt of consumption, and justifying bountiful production and consumption. Considering the consumption discussions above (Chapter 2.1) the endeavor of comparing industry with nature seems far-fetched. Such a metaphor might disguise the responsibilities of the current production and

consumption cycles, as if they were just natural as nature itself. Furthermore, it might lead to a deception that the current industrial system would be indispensable as nature.

3.5 The Case of Single Use Disposable Products

One of the most striking examples of unsustainable ways of consuming is disposability and design for single use, in which artifacts have the shortest life spans, as an extreme case. Shove et al. argue that changes and repetition of activities in society have inferences for consuming patterns and their surrounding establishments (2012, 2). Thus, as social practices, all the related activities around consumption of disposable products should be considered when tackling the issue of disposability. In this study, disposability is examined; in relation to key concepts of speed, mobility, hygiene, comfort, and convenience, which are often attributed to certain products as benefits of contemporary lifestyles.

One of the outcomes of consuming SUDPs is obviously the waste they become. Renner states that many aspects affecting how much and what kind of waste is created in cities, “from lifestyle choices to systems of production” (2016, 217). Environmental Protection Agency (EPA) in United States of America published the figures for Municipal Solid Waste (MSW) for 2010 by weight in Figure 3.3. Containers and packaging compose the biggest part of MSW generated: about 30 % (about 76 million tons). The second largest section is nondurable goods, which added up to 21 % which means almost 53 million tons (EPA 2010, 6).

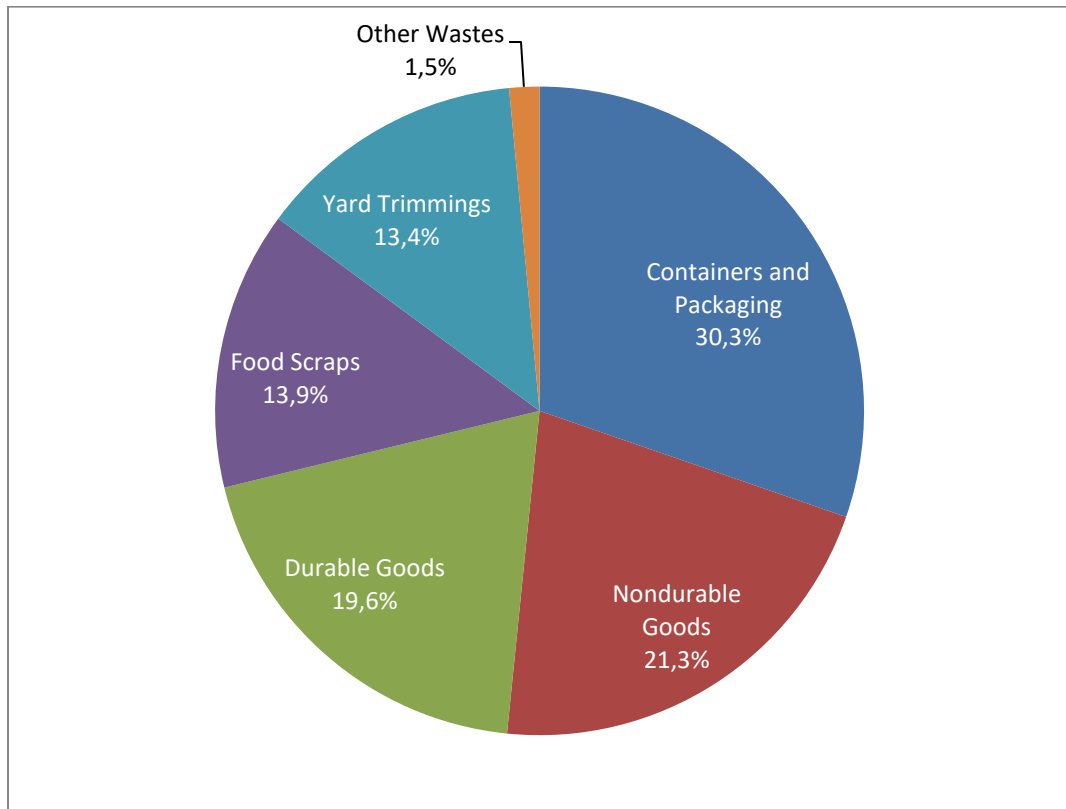


Figure 3.3 Total MSW by category, 250 million tons (before recycling) (EPA 2010).

Nondurable goods are defined by EPA as:

Products last less than 3 years. Products in this category include newspapers, books, magazines, office papers, directories, mail, other commercial printing, tissue paper and towels, paper and plastic plates and cups, trash bags, disposable diapers, clothing and footwear, towels, sheets and pillowcases, other nonpackaging paper, and other miscellaneous nondurables. (2010, 33)

2013 EPA report also informed of very close percentages and numbers: in solid waste, containers and packaging are at 29.8 % (75.8 million tons); whereas, nondurable goods are around 20.3 % which is over 51 million tons (2015, 9). Annually in United States of America in restaurants and cafés more than 52 billion disposable paper coffee cups are given away (Grishchenko 2007); whereas, a recent estimation is that 120 billion cups (plastic, foam, or paper) are used each year in the States (Clean Water Action, 2016).

Fisher's thesis on "disposable hot beverage cups" reveals that these products are perceived as having "obvious sanitary and convenience benefits", and he asserts that they are perceived as "clean and easy" (2008, IV, 3). But beyond their praised benefits and positive sides, they are disliked at certain contexts, for example with environmental considerations. The reasons why disposable products exist, and the reasons for people to continue to buy these despite many obvious drawbacks, are worthy to investigate. Disposable objects have a different kind of use relationship; and it has implications on design as well. Walker puts disposability as one of the issues that adds to obsolescence (2006, 140). He defines disposables as products that are openly planned to be short-term, and be throwaway to serve motives such as economic, hygiene, or safety (Walker 2006, 140). As Leonard states, planned obsolescence (accounted in Section 2.1.2) becomes not just rapid, but immediate, with the arrival of disposables. Primary innovation in this field was for diapers and hygienic pads, and the reasons for these specific objects to become popular are evident, but currently, "we have disposable cameras, mops, rain ponchos, razors, dishes, cutlery, and toilet brushes, flushable, even" (Leonard 2010a, 207). Figure 3.4 is an example of plastic disposable cups used for feeding premature babies, prescribed by medical doctors.

Assadourian asserts that "disposable paper product industry has cultivated the belief that these products provide **convenience** and **hygiene**" [emphasis added] including products such as paper plates, napkins, or tissues (2010, 14). For many people the use of these disposable products appear to be a necessity, however this idea might be **inherited in the current industrial system** progressed over many years [emphasis added] (Assadourian 2010).



Figure 3.4 Plastic Disposable Cups for Feeding Premature Newborn (Photograph by the author. 18.08.2014)

In 2008, Chinese market of disposables reached more than 14 billion dollars, and increased 11%, compared to one year before (Assadourian 2010, 14). 241 billion liters of bottled water was sold in 2008, which had doubled since 2000. Worldwide promotion endeavors generate an “impression that bottled water is healthier, tastier, and more fashionable than publicly supplied water”; yet, research has attained that tap water is safer in several cases than the brands of bottled water, and bottled versions are 240 to 10,000 times more expensive (Assadourian 2010, 14; also Leonard 2010b).

Thakrar states that according to the assessment of the Japanese government's Forestry Agency, in Japan the number of annually used disposable chopsticks (Waribashi) is 25 billion pairs, meaning approximately 200 pairs for each person, and in addition to that, yearly Chinese production of chopsticks is more than 45 billion pairs, corresponding to around 25 million trees. Most of the chopsticks

produced in China are consumed in Japan and South Korea (2008). (See also in Section 7.1.2.11).

Worldwide plastic bag use is about one trillion according to the EPA Blog (Anderson 2016). Whereas, In Turkey annually around 20 billion plastic bags are estimated to be used (Palandöken 2017).

Renner argues that businesses are responsible for making profit by influencing people to acquire more and by producing “**overly packaged** [emphasis added], short-lived products that cannot easily be repaired”, just without bearing the consequences (2016, 217-218). Nevertheless, the motivation of take-back laws or eco taxes for example would be initiated by people from bottom-up; otherwise, governments would be too slow to take action on time. Still, the solution for Renner too, most significantly is the attempts of decreasing the generation of waste in the first place (2016, 218).

Initiatives and Approaches for Decreasing SUDP Use

In order to tackle these challenges, there are several endeavors for decreasing use of SUDPs, to alleviate problems caused because of them by:

- decreasing or boycotting the use of SUDPs,
- banning SUDPs,
- creating alternative products for SUDPs,
- creating better materials for SUDPs.

The California based “ReThink Disposable” campaign is an example of a civil endeavor to decrease the use disposables, setting the problem as “our throwaway lifestyle” (the Clear Water Action Website 2016). The campaign’s claim is that people should be more focused on reducing consumption of SUDPs, either by using their alternatives, or calling for policies of banning, such as plastic bag bans. In Figure 3.5, the campaign’s aim is defined as “to replace single use disposables with re-usable and durable products” in their social media sharing (ReThink Disposable

Facebook Group 2016). According to the campaign information, plastic producers with their ‘anti-liter’ campaigns, which are often, only concentrating on recycling, try to shift the perception that the problem is bound to be seen as solely individuals’ responsibility (the Clear Water Action Web site 2016).

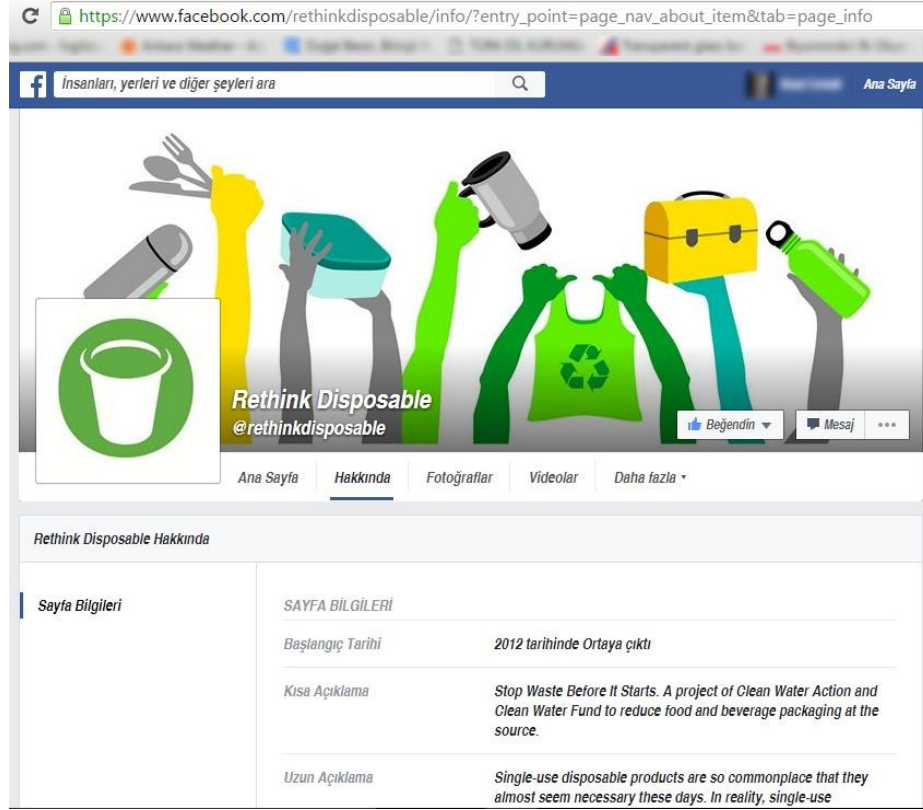


Figure 3.5 Screenshot of ReThink Disposable Facebook Group (2016).

A current example for creating alternatives for SUDPs from India is a campaign for “safe menstrual health” (Jatan Sansthan Website 2016). As part of this campaign, menstrual pads (Figure 3.6 and Figure 3.7) are produced, which are “washable and re-usable” and they are defined as “safe and eco-friendly” (Jatan Sansthan Website 2016). The project was initiated as a student project with the aim of creating a healthier option to synthetic disposable pads, as explained by Murthy (2015a, 380). They are “made of layers of cotton fabric, styled to button down under the underwear” (2015a, 380).



Figure 3.6 UGER Re-usable Menstrual Pads as a part of “Safe Menstrual Health” Campaign (Jatan Sansthan Website 2016).



Figure 3.7 UGER Re-usable Pads (Murthy 2015b).

They allow washing and re-using for around 60 times. According to Murthy, with the advertisements, people are convinced that disposable pads are better; indeed she finds this questionable, since materials of disposable ones (“polyethylene and super

absorbent polymers” etc.) are not biodegradable, and might also cause allergies and other skin problems (2015a, 380).

An example for creating alternative new materials for single use plastic cutlery: a company called Bakeys from India produces edible cutlery made up flours of millet, sorghum, rice, or wheat (Bakeys Edible Cutlery Website 2017). It is argued that the demand for plastic cutlery is increasing, and the plastic materials indeed contain carcinogenic and toxic materials, therefore it is important to introduce a new ecological option (Bakeys Edible Cutlery Website 2017).

Another example to propose new materials is from a company called Leaf Republic in Germany. They manufacture biodegradable containers and plates made of leaves (Figure 3.8), where no synthetic additives, no coloring or glue is used (Leaf Republic Website 2017).



Figure 3.8 Leaf Republic Plate (Leaf Republic Website 2017).

Another initiative from Germany offers a systematic approach for alternative usage of hot beverage cups. In Hamburg recently eleven cafes participate to the program

that provides to-go coffee cups which are reusable called ‘Refillit’ (Metcalf 2016). Deposit paid can be collected after borrowed cup is taken back to any of these cafes. The cup for refill is made of biodegradable bioplastics (Refillit Website 2017).

Like many other places, in Turkey too there are recent attempts of plastic bag bans, examples from two small islands in Aegean Sea: one is the municipality of Gökçeada, “it is resolved that instead of plastic bags, 100% bio degradable in nature or containing oxo-degradable² products, alongside with paper bags should be used starting from 2015 June” [Author’s translation from Turkish] (Adahaber Website 2016). The second one is municipality of Bozcaada:

it is resolved that plastic bags are banned, and only for providing convenience for carrying heavy materials, it is allowed to use one size bag of 30x60 centimeters, 100% bio degradable in nature and environment friendly, which has been TSE and ISO certificated (the certificates should be printed on the bag); and only for fishers it is allowed to use 24x40 centimeters sized 100% bio degradable. [Author’s translation from Turkish] (Municipality of Bozcaada Website 2016)

In addition to these, in places certificated as ‘Slow City’ also called ‘Cittaslow’ (for Slow Living see Section 2.2.3) plastic bag bans or the use of alternatives are also encouraged. For instance in Seferihisar, a town in İzmir in Turkey, the town council decided that in farmers market of Sığacık and Seferihisar instead of plastic bags, the use of paper bags, recyclable bags or string bags will be ensured (Municipality of Seferihisar 2010).

Nevertheless, the bag ban has not been influential yet for Gökçeada, reports Sağlam (2015). Besides, Keleş et al. (2015, 308) referring to the examples from other countries, assert that charging plastic bags does not guarantee the decrease of their use and a change in the use patterns over the long term.

² Oxo-degradable material is a kind of bioplastics. Explained by Tönük (2016, 102) it is made of basically polyethylene, and has additives helping to degrade. That is why it is indeed controversial to defend them as ecologically concerned.

These examples above are small in scale and not effective enough to prevent vast numbers of global consumption. In this thesis, instead of elaborating on such suggestions, the underlying reasons of the widespread use of SUDPs are examined, and reasons behind their perception as cheap, abundant, and accessible are searched. The thesis also questions the so-called cheapness, abundance, or accessibility, etc., of these items.

In the following chapter, the research design and methodology conducted for this thesis are explained.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Research Methodology

This study is determined as a qualitative research. Maykut and Morehouse explain qualitative research as: capturing people's "words and actions" in order to detect patterns, different from quantitative research, which forms the hypothesis and tests data accordingly (2005, 17). They define the contribution of 'phenomenological position' as *discovering* propositions of people and social environments, not proving or verifying them (2005, 14). For Bryman (2012), the goal of qualitative social research in general is to reach everyday thoughts of people, then interpreting people's actions and social settings from their ideas. He mentions interpretivism and phenomenological approach as figuring out subjective meanings of social action.

The character of the approach for this study is 'discovery research', which Squires (2009) explains as gathering and examining various forms of information records (verbal, visual or other) to find out whatever people do in their ordinary surroundings. The aim of examining the gathered data according to Squires, is to discover "patterns of shared beliefs, behaviors, values, and rules" (2009, 118).

The framework of this study comprises three main stages as shown in Table 4.1.

Table 4.1 The Stages of the Research

Stages of the Research		Number of Participants
stage 1	Survey in Turkey	191
stage 2	Semi-structured in-depth Interviews in Turkey	16 (chosen from participants of survey in Turkey)
stage 3	Survey I in Japan	160
	Survey II in Japan	6 (chosen from participants of survey in Japan)

The research design of this study is twofold location-wise: Turkey and Japan; since issues of sustainability and consumption are globally significant. By examining the patterns of consumption in two different countries, it is possible to comprehend whether locality is an important factor or not. Therefore, comparative surveys in two countries were done, whereas, interviews in Turkey were executed for depth; while, the research in Japan was planned as secondary in character. The open-ended questions of Survey in Turkey are analyzed and presented as tables, with numerical presentation only, since interviews in Turkey have sufficiently rich data for the qualitative approach. On the other hand, thematic analysis was done for the open-ended questions of Survey in Japan, in order to match the findings with the findings of the interviews in Turkey.

Turkey is the homeland of the author where this study had been initiated. In the following phase, the author went to Japan for research for a one-year period, on the Japanese Government Scholarship (Monbukagakusho: MEXT). This period was used to conduct further study in the Japanese context.

According to Güvenç (2016, 277) in Turkey, generally people do not show much respect to nature, seeing natural resources as unlimited is quite common, and many people are indifferent to environmental devastation. Likewise Tuna (2015, 292-293) argues that in general economical expectations and expectations of welfare are

prioritized and considered to be more important than environmental sensibility. His view is that environmental nongovernmental organizations in Turkey appear to be more marginal in status, compared to other countries. Keleş et al. (2015, 240) state that environmental groups in Turkey are not developed enough; cannot become a massive power, compared to the Western world. On the other hand, Bora (2017, 707-708) when referring to green ideologies in Turkey, mentions that recent Gezi incidents that started with protests for cutting trees in the park, had actually an undeniable green content. Thus, even though there are certain attempts in Turkey, taking into consideration the ranking of the Environmental Performance Index (2016), where 180 countries are ranked for their total objectives of “ecosystem vitality and environmental health”, in which Turkey is 99th, whereas Japan is 39th; it is seen that the levels of mentioned issues differ for Japan and Turkey.

In the case of pursuing research in Japan, one of the reasons is to find out whether the qualities particular to Japan, such as reverence to nature and attention given to objects, have an effect on the use of SUDPs. Furthermore, a comparison (in a confined manner) between two countries is intended, in order to see the differences and similarities in attitudes and approaches of responsible consumers towards SUDPs, when there are obvious cultural, economic, and geographical differences. The implications of the traditional inclination of Japanese people for keeping and using artifacts with a special concern are searched for in the context of sustainability (explained in detail in Section 4.4.1).

4.2 Stage 1: Survey in Turkey

The survey in Turkey was made primarily to gather information about SUDPs; and to find out the behaviors of responsible consumers (explained in Section 1.3) towards SUDPs in order to reveal the challenges about SUDPs. It was planned for showing the tendencies of responsible consumers, and as a pre-study to do sampling for interview participants.

4.2.1 Sampling for the Survey

‘Purposive sampling’ is done for this study (Wilson 2011). The reason of focusing on one particular group, in this case, ‘responsible consumers’ is that abundant information is expected from them, on their conflicts and challenges about the use of SUDPs. By looking at the experiences of consumers with high sensitivity, when their awareness increases, the possibility of gathering more profound answers increases as well. Since, this specific group of people is predicted to give considerable amount of time and energy for contemplating on environmental issues and on SUDPs, and searching for re-use options or various other alternatives. In addition to that, because they are knowledgeable about environmental problems, their sensitivity and motivation are expected to lead to productive results and insights.

4.2.2 Representativeness of the Chosen Sample as Responsible Consumers

In order to reach to a sample who would be defined as ‘responsible consumers’, the assumption of this study is that following news and resources on environment and ecology, or being a member of associations or groups related to these issues, or attending related courses and workshops, would be indications of being a responsible consumer.

Therefore, announcement of Survey in Turkey was made at the environmental groups and associations, and in social media, etc., which the author of this research is also a member. Appendix A gives the list of these nine groups related to environment, ecology, sustainable food, permaculture, and ecovillages. They facilitate the access to potential participants for the study.

4.2.3 Conduct of Survey

Firstly, the survey was piloted paper-based with 10 people in April 2011. Then, modifications were made (see Appendix B for the Survey and Appendix D for

English translation). The revisions and changes were made after the pilot study: for instance, multiple-choice table of extensive list of SUDPs was added to the survey, after realizing that the participants cannot recall many of the disposable products, when answering the open-ended version of the same content.

The online survey program Survey Monkey© was used for the final version of the survey. The online version which is titled as “*Sürdürülebilir Tüketim*” (Sustainable Consumption) URL was accessible between July 26th and September 26th 2011 (See Appendix C for the online survey screenshots). The link for the URL of the online survey was sent to the environmental groups in Turkey via e-mail and shared at the Internet social media in August 2011, in order to reach the desired group of people.

Between August and September 2011, the total number of people who participated in the survey is 280 people. Eighteen participants were eliminated who answered all of the questions 4, 5 and 6 as “no”, in order to make the sampling consistent with ‘responsible consumers’. The responses of 262 participants were left for evaluation; however 191 of these participants (68%) completed the survey. Since, not all participants who started answering finished the whole survey, the number of responses vary for each question.

The average age of the survey participants is 34 years old, ranging between: 17-68 years old. Age distribution of the survey is shown in Table 4.2. 64% of participants are female, 36% are male. All of the participants are from Turkish nationality.

The survey consisted of 24 questions (including brief demographic information). Fourteen of the questions were open-ended. In the first section of the survey, there were three questions about how much the participants are related to or sensitive about sustainability. At the end of the survey, there was an extensive multiple-choice list of single-use disposable products, on which participants marked with X, whichever they use.

Table 4.2 Age Distribution for the Participants of Survey in Turkey

Age Range	Number of Participants	%
17-24	27	14
25-34	91	48
35-44	45	24
45-54	17	9
55-64	8	4
65-77	1	0
undisclosed	2	1
total	191	

The questions 17, 18 and 19 were for the producers and / or sellers of organic products, however later on the analysis process, the data from these questions were eliminated, since there were not enough reply gathered, and some of the participants misunderstood who was addressed in these questions, and incorrectly replied even though they were not producers or sellers.

For the quantitative data gathering and for the certain parts of the analysis, Survey Monkey© program was used. The program was used as a tool for creating charts or lists, including open ended response lists, response counts and response percentages by using Microsoft Office Excel program.

4.2.4 Grouping the Open-ended Replies

The data collected from the open ended replies in the survey was subjected to content analysis. It was formed into tables in Microsoft Office Word program. In order to quantify, they were divided into phrases, then clustered based on similarity (or being identical), and then counted. Some of the groups consisted of subgroups. For example, beverage packages are grouped together, and this main group includes PET bottle, Tetra Pak, tin beverage can, etc.

4.3 Stage 2: Semi-structured In-depth Interviews

For the second stage of the research, semi-structured in-depth interviews were planned. Interviewing offers the chance to gather ‘firsthand’ data, which can be gathered by no other way (Gillham 2000). ‘Face-to-face’ interview is effective when: people are accessible, the research questions are required to be examined deeply, and the research requires deep understanding and insights (Gillham 2000, 9-11). Gillham (2000) puts the interview technique in a scale from ‘unstructured’ to ‘structured’. In the ‘structured’ extreme, there is tightly scheduled interview with close-ended or multiple-choice questions; whereas, the most unstructured way of interviewing is informal dialogue. Lofland defines the unstructured “intensive” interview as “flexible”, and the goal is “to elicit rich, detailed materials that can be used in qualitative analysis” (1971, 75-76).

Hence, following the survey, in-depth interviews were conducted. The aims of conducting interviews are about finding out how responsible consumers define their experiences with SUDPs in their everyday life, and examining thoroughly the examples they use. A detailed understanding by analyzing participants’ discourse related to these examples leads to comprehend patterns of use, and reasons behind their habits of consuming SUDPs.

4.3.1 Sampling for the Interviews

For the recruitment of the semi-structured in-depth interview participants, the survey results were used. First of all, among 99 participants out of 262 replied affirmative to Questions 4, 5 and 6. Then, Question 23 in the survey asked whether they would like to ‘participate in the continuation of this study’ (approximately 40-50 minutes interview). The total number of the participants who replied “yes” to this question was 126 out of 191. Nevertheless, matching with the group of participant who answered as “yes” to Questions 4, 5 and 6, and gave valid contact information were 48 people. Among these participants, some of those who rejected to be interviewed made explanations such as: one of them does not keep or re-use

any of used packages, and another participant states that she rejects because of her nomad lifestyle. The reason for stopping after sixteen interviewees is that, similar replies were found, and recurring patterns were gained. Then, it was decided that satisfactory amount of data was gathered.

The profiles of the participants are provided in the following paragraph: sixteen participants (see Table 4.3 for the list of interview participants) were chosen among the survey participants for the in-depth interviews; the selection was based on basically availability.

Eleven of the interview participants are females and five are males. The average age of them is 36, ranging from 21 to 59. Twelve participants are from Ankara, three are from İstanbul and one is from Eskişehir. As for the education levels of the participants: there were one bachelor student, three bachelor's graduates, ten master's graduates, and two PhD degree graduates.

4.3.2 Conduct of Interviews

The participants were interviewed between August and September 2011. The average voice record time is 60 minutes, with a minimum of 26 and maximum of 149 minutes. Apart from one, all of the interviews took place face-to-face. One participant from İstanbul was interviewed by online telephone call (Skype®). Although it was initially intended to do the interviews in participants' living environments (home or office), half of the participants accepted to be interviewed at their own living environments. Seven of the them chose to be interviewed in their offices, one in her home, three of them in a cafe, three at the researcher's home or office, and one in an ecovillage (at the time, the researcher and the participant happened to be at an environmental workshop).

Table 4.3 List of Interview Participants

	Location	Age	Number of Children	Gender	Job-Occupation	Dates	Photos Taken	Voice Rec. Minutes
1.	İstanbul	30	-	F	Architect-Publisher	19.06.2011 – 22:00	19	60
2.	METU Ankara	54	-	F	Disability adviser in university	27.07.2011 – 13:00	35	80
3.	METU Ankara	27	-	F	Science teacher-PhD student, Research assistant	16.08.2011 – 17:00	7	41
4.	METU Ankara	26	-	M	Industrial Designer-Research assistant	26.08.2011 – 10:10	39	149
5.	METU Ankara	39	2	M	Electric-electronic engineer-Academician	27.08.2011 – 10:50	3	50
6.	İstanbul	21	-	M	Engineering Student-Entrepreneur	04.09.2011 – 14:00	5	29
7.	METU Ankara	59	1	M	Chemist-Academician	09.09.2011 – 12:00	2	49
8.	METU Ankara	29	-	F	Industrial Designer-Research assistant	14.09.2011 – 13:10	26	67
9.	Ankara	31	-	F	business administrator-Yoga instructor	15.09.2011 – 19:00	12	43
10.	Eskişehir	32	-	M	Philosopher-instructor	16.09.2011 – 14:30	2	62
11.	Ankara	31	-	F	Ceramics artist-PhD student	18.09.2011 – 14:15	11	67
12.	İstanbul	40	-	F	Industrial Designer-Sustainability consultant	18.09.2011 – 16:10 with Skype ®	8	56
13.	METU Ankara	47	2	F	Industrial Designer-Academician	19.09.2011 – 10:00	10	59
14.	Ankara	44	1	F	Industrial Designer-Translator	22.09.2011 – 16:00	7	56
15.	Ankara	31	-	F	Landscape architect-Geographical analyst	23.09.2011 – 12:30	2	65
16.	Ankara	37	-	F	Agriculture Engineer-Project consultant	23.09.2011 – 17:00	-	26

The content of the interview is as follows (See Appendix E for the full interview guideline in Turkish; see Appendix F for translation into English): the interviews were planned in two phases. In Phase 1 there were questions to collect demographic data of the participant, and general questions about SUDPs. Three examples of SUDPs were requested for Phase 2. At least one product was asked to be from the group of food and beverages. Other than that, the participants were free to choose any SUDP.

In Phase 2, specific questions were asked on the three examples of SUDPs chosen by the participant. It was initially planned to conduct Phases 1 and 2 separately, in order to allow participants enough time to gather three different examples from their homes or offices. However, all of the sixteen participants wished to be interviewed through the Phases 1 and 2 together; they prepared and brought the three products along with them.

Verbatim transcription of the full data of the interviews was done; the total raw data sums up to 75 thousand words. Later, the data was reduced to 37 thousand words. This process was the first step of “data condensation” (Miles and Huberman 1994, 10-11). Then the data was tabulated for analysis by using the program Microsoft Office Word; and divided into tables. Five thousand words of the selected paragraphs were translated into English to provide direct quotations from the participants.

Thematic Content Analysis

For the analysis of the data collected, content analysis was used. Content analysis is advantageous for “large volumes of data” (Krippendorff 2004, 42). In qualitative research methods, content analysis is used to discover patterns (Marshall and Rossman 1983, 98). One of the aims of the content analysis is to identify trends of a definite group of people (Colorado State U. Website).

As for the analysis of interviews, according to Krippendorff (2004) since interviewees talk freely in the open ended interviews, researcher should carry out interpretation according to the theory chosen.

A preexisting coding or classification system to analyze the content should be used; or if not available an original one should be created (Marshall and Rossman 1983, 99). Whether or not proving the hypothesis at hand, “where the greatest emphasis lies after the data have been gathered” is able to be determined by this method (Marshall and Rossman 1983, 100). The data should be broken up into manageable content categories by “selective reduction” (Colorado State U. Website). Marshall and Rossman state that “when critical variables are defined, the relationships among them are established”, the analysis is finally be integrated into a grounded theory (1983, 114). By inquiring the data at hand and contemplating the theoretical outline, the data is composed into a consistent and integrated knowledge, in order to produce “categories, themes, and patterns” (Marshall and Rossman 1983, 115-116). According to Wilson, in the content analysis of data, implications are composed from the outcomes (2011, 177).

For Krippendorff (2004), text to be analyzed has no innate meaning prior to analysis; this suggests that there is no intrinsic meaning to text, and meaning is not singular, and not waiting to be dug out. Depending on the researcher’s intent and interpretation, connotations are derived from the text, which are specific to the context.

Consequently, the data in this study is classified according to novel themes (not pre-defined), by looking into the data in order to group recurrent ideas of the participants. Patterns are sought and key phrases are generated accordingly.

4.4 Stage 3: Survey in Japan

The reason for conducting a further study is to find out use patterns of SUDPs not only in Turkey, but also in a different country, and see whether there are any

differences and similarities in terms of behaviors and habits, with a perspective of sustainable consumption.

4.4.1 The Purpose and Reasons of the Study in Japan

Turkey and Japan are quite different countries, location-wise, culture-wise, and economically, as well as in terms of development level. The study in Japan aims to see whether these differences affect the types and ways of consumption, specifically for SUDPs.

Not just any other developed economy, but Japan was chosen for this study, as an affluent society it has special qualities imputed as idiosyncratic. Reminding that a nation's culture is neither monolithic nor constant, there are still noteworthy qualities to discuss, which are significant for this study. First of all, there is a strong impression that the Japanese people give importance to traditional culture, evident by respect paid to traditional objects and rituals. One of the basis of this attitude is thought to be a belief that all things have spirits and are worthy of reverence (De Mente 2006). In addition to that, Japanese people are known for giving great care and respect to nature, which is expected to influence the environmentally responsible behavior of people. Brown asserts that beginning with the Edo period in 17th century in Japan, with the natural limitations of the land, the attitude of humbleness and approaching waste as a taboo became deep-rooted (2009, 10).

Another reason of research in Japan is to see how different the consumption patterns are, when the cultures and geographies of two countries are majorly different. For the inference from the traditional culture of Japan and its relationship with contemporary consumption, Robins and Roberts state that: in Japan there is a fast transformation from "mass consumption / mass disposal economy to one of sustainable consumption" (2006, 47). Due to the emphasis of tradition, the lessons from aged people have been researched by the Environmental Agency of the government of Japan (1994). It concluded that elderly in Japan rely on ideals of using resources with appreciation and using only what is sufficient (quoted in

Robins and Roberts 2006, 47). Likewise, Furukawa's research reveals that among the main values of aged in Japan, under the heading of "taking good care of things" there are the values of:

Things used in everyday life are grown/nurtured and preserved with care,
Maintenance (garden, tools, clothes),
No excess of things,
Acting with half a year into the future in mind,
Using up things, finding multiple uses, using over generations,
Repairing and using again (Furukawa 2015, 146).

Robins and Roberts add that there is a shared awareness in the Asia-Pacific region which is rooted in conventional prudent ways of life, and there is an understanding that emphasizes living together in harmony with nature; which has commonly been endangered by the entrance of mass consumption (2006, 47). Therefore, intent of the study is to see how much above-mentioned issues would be relevant about the use of disposable products and the alternatives of these. Japan has a well established recycling and waste management system. Therefore, this condition should be considered in the questioning of the existence of SUDPs, and the usage patterns of participants of such a study.

The study also searches to discover and observe whether there are any features particular to Japan in terms of the potential alternatives of SUDPs. Kumar emphasizes the superiority of *furoshiki* which is a traditional cloth used in Japan: it is employed to wrap objects in order to carry or for presents. He mentions its inspirational potentials, as its being washable and re-usable (2009, 48-49). Thus, the use of Furoshiki, My Hashi (re-useable chopsticks), and Bento (lunch box) are also researched in this study (see Section 7.1.2.10, Section 7.1.2.11, and Section 7.1.2.12).

4.4.2 Research Methodology of Field Study in Japan

There are methodological differences between the Japanese and Turkish field studies. Similar field studies were planned and conducted in Turkey and Japan, the two researches were not done in a parallel fashion, but were done in a sequential

manner, i.e., the survey and the interviews were firstly finished in Turkey, and then the survey was conducted in Japan. The advantage of this is being able to design the second study, by using the primary findings of the first one. So, it was possible to transform long answered open ended questions of survey in Turkey into multiple-choice questions for the field study in Japan, by using the collected and pre-analyzed data. Hence, it prevented unnecessary repetitions.

The other reasons for collecting a different set of qualitative data are due to the language barrier, workload, and time limitations (explained in Section 8.6, Limitations of the Study). Instead of doing extensive interviews as in Turkey, which are based on verbal communication done in both the researcher's and the participants' native language, Japanese participants were asked to fill in the survey in their own native language, and then in the second phase, the chosen participants were asked to send related photographs and short information.

4.4.3 Sampling for the Survey in Japan

Participants of the survey in Japan were mostly reached through e-mail by the Kondo Laboratory members in Kyushu University, in the Graduate School of Design, in the Environment and Heritage Design Program. Participation request was sent to several groups, organizations, and associations related to environment or sustainability, mostly around the Kyushu province. In addition to this, the students and members of the faculty were invited to participate in the survey; since the number of participants was insufficient.

4.4.4 Conduct of Survey I

The language of the survey is Japanese (see Appendix H for the Survey I in Japan in Japanese, and Appendix I for English translation). The survey consisted of 19 questions (including brief demographic information). Two of the questions were open-ended. The number of the open-ended questions is reduced based on the data

from the survey done in Turkey. The rest of the questions are transformed into multiple-choice format.

Firstly, the survey was piloted with sixteen people in September 2012, nine by paper-based, the remaining seven via e-mail. After gathered, certain modifications were made. The pilot study results were translated into English by a professional translator whose native language is Japanese. Then, minor revisions were made in order to form the final version.

The average age of participants of Survey I is 33 years old, ranging between: 18-77 years old. Age distribution of Survey in Japan is shown in Table 4.4. 56% of participants are female, and 44% are male.

Table 4.4 Age Distribution for the Participants of Survey in Japan

Age Range	Number of Participants	%
17-24	72	45
25-34	31	19
35-44	20	13
45-54	11	7
55-64	14	8
65-77	9	6
undisclosed	3	2
total	160	

All of the participants are from Japanese nationality. 143 of the participants are from the city of Fukuoka (where the field research has taken place.) The rest of the 17 participants are from other twelve cities in Japan who were reached via e-mail, such as three people from Tokyo.

A total of 207 people replied the final version of the survey between October 2012 and May 2013. The survey was conducted either paper-based or by e-mail. 120 people preferred to reply in paper-based format, the other 87 people by e-mail (in Japan, it is observed by the author that in daily life, people often confront paper-based, short, and multiple-choice questionnaires; they are commonly eager to respond).

Forty-seven of the responses were eliminated later in the process due to their answers “no” to all of the questions 3, 4 and 5; which means that they are not expected to be closely related to environmental issues, or are not the members of groups or NGOs related to environment. This elimination makes the sample comparable to the sample in Turkey. Finally, 160 of the responses were left for evaluation.

4.4.4.1 Translation of the Data

The survey results in Japan (other than pilot study) were translated by three different professional translators, either to English or to Turkish, and then edited by the author. Afterwards, Turkish translations were translated into English by the author.

4.4.4.2 Questions Added Specially for Japan

In addition to the questions asked in the survey in Turkey, three questions were added to the survey in Japan. The first two questions were related to the two traditional Japanese artifacts: **Furoshiki** (Japanese traditional wrapping cloth), and **Bento** (re-usable lunch box). They were chosen for researching disposable products versus traditional re-usable alternatives. The third question was about **Waribashi** (single-use chopsticks), which are very frequently consumed in Japan. There are re-usable versions of chopsticks, frequently called ‘My hashi’ carried along in a case, often alongside with a bento (Table 4.4).

Table 4.5 List of disposable products versus traditional re-usable alternatives in Japan

Plastic Bag	vs.	Furoshiki
Waribashi	vs.	‘My hashi’ (Re-usable Chopsticks)
Single-Use Plastic Bento box	vs.	Bento

4.4.5 Conduct of Survey II

The second step of the study in Japan continued with Survey II (see Appendix J for the Survey II in Japan in Japanese, and Appendix K for English translation), which was done via e-mail message, in order to gather visual documentation of the use patterns.

The participants of Survey II were chosen from among participants of Survey I, this was based on Question 18 in Survey I, which asked whether they would like ‘to participate in the continuation of this study’ (such as sending photographs of the products that they are re-using, or Furoshiki, My-hashhi, and Bento). There were 71 participants who checked this question as ‘yes’. Besides, checking ‘yes’ to this, and having written their e-mail address, the ones who replied ‘yes’ to all of the questions 3, 4 and 5 were elected. Thus, the number of the participants chosen was reduced to 21. The e-mail message was sent to 21 participants in August 2014. Three people could not be reached by e-mail. Among 18 people reached, six of the participants replied until 24 December 2014. A total of 32 photographs were sent by the participants via e-mail. Three of the participants are female, and three are male. The average age of participants of Survey II is 41 years old.

In the following chapters 5, 6, and 7, the findings of field research of this study appear in detail.

CHAPTER 5

STAGE 1: SURVEY IN TURKEY

An online Survey on SUDPs use was conducted with 191 participants who are defined as ‘responsible consumers’ in Turkey. The research design and the process of the survey are explained in detailed in Section 4.2. Survey questions are shown in Appendix B for the Survey and Appendix D for English translation.

Presentation in the tables and figures below are obtained by grouping the open-ended answers of participants. These tables and figures are based on the statements of participants, so they do not represent conclusive quantitative result. Percentages show the participants’ statements of each item, and each participant usually replied with more than one item for each question; therefore, results in the tables and figures do not count up to 100%.

5.1 Findings of Survey in Turkey

Checking Participants for Environmental Commitment and Behavior

The selection method of ‘responsible consumers’ as participants for this study is explained in Section 4.2 under the heading: Sampling for the Survey. The three questions in the first section of the survey were asked in order to identify the commitment of participants to the issues about environmental or sustainability, and to reach participants who were in related networks. Nevertheless, people might have different motivations when following news or publications, or entering these networks. Therefore, the results of the questions do not necessarily reflect a full dedication to sustainability issues. Still, the assumption of this study is that

participants, who associate themselves to environmental awareness and sensitivity to some extent, reply the three questions mentioned affirmative. The results of these three questions mentioned above are presented in Section 5.1.1, Section 5.1.2, and Section 5.1.3.

95 % of the participants either follow or sometimes follow the news or publications, related to the topics of sustainability, ecology, environment, nature, or permaculture. More than half of the participants were members of (or they follow) groups or organizations related to sustainability, ecology, environment, nature, or permaculture. Turkey Permaculture Research Institute and Permaculture Network; Slow Food International and Slow Food Turkey; Buğday Ecological Living Association; and Greenpeace international / Greenpeace Mediterranean are found to be the most prominent for both the sources of news and publications, and the groups or organizations. About half of the participants attended the courses, trainings, workshops, conferences or trips related to the subject.

5.1.1 News and Publications

262 participants answered Question 4, which asked whether or not participants follow news or publications, related to the topics of sustainability, ecology, environment, nature, or permaculture. From the answers given to this question, it was seen that 51 % of the participants indicated that they follow news or publications. 44% of the participants declared that they sometimes follow, and 5% of them stated that they do not follow any. The types of sources that are used by the participants are below stated:

- Internet (websites, blogs, social media, e-mail groups, social networks);
- TV, films, radio;
- Periodicals and print (magazines, newspapers, books, publications, publishing houses, lecture notes);
- Associations, institutes, foundations, movements, collectives;
- Activities, significant people in this area;

- Others (e.g. nature, social relations, learning by experiencing the master-apprentice relationship).

The percentages of the news or publications that participants follow are shown in Table 5.1:

Table 5.1 Sources News and Publications.

Question 4		%
1.	Buğday Ecological Living Association, Guide Booklet, Buğday magazine, Bulletin, Website www.bugday.org	16
2.	Turkey Permaculture Research Institute, Turkey Permaculture Network www.permakulturplatformu.org , Permaculture Turkey e-mail Group	16
3.	Sinek Sekiz Blog, Published Books http://www.sineksekiz.com/	12
4.	Slow Food, Slow Food International, Newsletter Slow Food Turkey, Slow Food “Fikir Sahibi Damaklar” Group, Slow Food Gençlik Gıda Hareketi (Youth Food Movement Turkey) e-mail Group http://slowfoodgenclik.wordpress.com/ , Slow Food Turkey Movement- Facebook	6
5.	National Geographic Magazine	6
6.	NTV, Ntvmsnbc http://www.ntvmsnbc.com NTV Yeşil Haberler (Green News), Yeşil Ekran, “Bay Yeşil” Program	6
7.	Greenpeace, Greenpeace Mediterranean http://www.greenpeace.org/mediterranean/en/ Greenpeace e-mail Group	6
8.	Atlas Magazine	5
9.	Güneşköy Cooperative http://www.guneskoy.org.tr/ e-mail Group	3
10.	DBB: The “Natural Food, Conscious Nutrition” group (Doğal Besin Bilinçli Beslenme) http://ankaradbdb.wordpress.com/ in Ankara Turkey. E-mail Group http://groups.google.com/group/dogal-bilincli-beslenme/about	2
11.	Doğa Derneği (Association) http://www.dogadernegi.org/	2
12.	Bianet (Independent Communication Network) www.bianet.org	2
13.	Bilim ve Teknik Magazine	2
14.	Eko IQ Magazine	2
15.	İmece Evi http://www.imeceevi.org/	2
16.	Tree Hugger http://www.treehugger.com/	2
17.	Yeşil Gazete http://www.yesilgazete.org/	1
18.	Ekoloji Kolektifleri, Website http://www.ekolojistler.org/	1
19.	Kardeş Bitkiler Blog http://kardesbitkiler.blogspot.com/	1
20.	Kolektif Ekososyalist Magazine http://kolektifdergisi.blogspot.com/	1
21.	Books of Bill Mollison	1

5.1.2 Associations, Institutions, Foundations, Movements, Collectives, Societies, Networks, Groups or Organizations

262 participants replied Question 5, which was about being a member (or following) of groups or organizations related to sustainability, ecology, environment, nature, or permaculture. 56% of the participants were found that they are members or they follow groups or organizations. 44% of them said that they are neither a member nor follow those. The percentages of the groups or organizations that participants are a member of or that they follow are shown in Table 5.2.

Table 5.2 Associations, Institutions, Foundations, Movements, Collectives, Societies, Networks, Groups or Organizations.

Question 5	%
1. Turkey Permaculture Research Institute, Turkey Permaculture Network www.permakulturplatformu.org , Permaculture Turkey e-mail Group, Permaculture Groups (İstanbul, Ankara, Worldwide)	13
2. Slow Food, Slow Food International, Slow Food Turkey, Slow Food “Fikir Sahibi Damaklar” group, Slow Food Gençlik Gıda Hareketi (Youth Food Movement Turkey) http://slowfoodgenclik.wordpress.com/	6
3. Buğday Ecological Living Association www.bugday.org	6
4. Güneşköy Cooperative http://www.guneskoy.org.tr/	5
5. Greenpeace, Greenpeace Mediterranean http://www.greenpeace.org/mediterranean/en/	5
6. DBB: The “Natural Food, Conscious Nutrition” Group (Doğal Besin Bilinçli Beslenme) in Ankara Turkey. E-mail Group http://ankaradbdb.wordpress.com/ http://groups.google.com/group/dogal-bilincli-beslenme/about	4
7. TEMA Türkiye Erozyonla Mücadele, Ağaçlandırma ve Doğal Varlıkları Koruma Vakfı (The Turkish Foundation for Combating Soil Erosion for Reforestation and the Protection of Natural Habitats)	2
8. EDE Ecovillage Design Education e-mail Group, EDE Turkey	2
9. Doğa Derneği (Association) http://www.dogadernegi.org/	2
10. İmeceiletişim, İmece evi, e-mail group	2
11. Ekolojik Mimari ve Doğal Yapı Ağı (Ecological Architecture and Natural Building Network)	2
12. Ekin Hareketi (Movement), e-mail group	1
13. Permablitz, e-mail group, Facebook group, Permablitz Istanbul	1
14. Sinek Sekiz Publishing Blog, e-mail group, Facebook page	1
15. Kardeş Bitkiler, activities	1
16. Permankara e-mail Group	1
17. Mağara Araştırma Derneği (Speleological Research Association)	1
18. Yeşiller, Yeşiller Partisi (Turkish Green Party)	1
19. Bird Watching Society of Middle East Technical University	1
20. O2 International Sustainable Design Network, O2 Turkey	1
21. WWF (World Wildlife Fund)	1
22. Doğa Araştırmaları Derneği (Nature Research Association)	1
23. Gaia, Gaia Turkey	1

5.1.3 Courses, Trainings, Workshops, Conferences or Trips

262 participants answered Question 6, which inquired the courses, trainings, workshops, conferences or trips attended or participated; related to sustainability, ecology, environment, nature, or permaculture. 53% of the participants said that they joined these kinds of activities; and 47% of them did not join. The percentages of the activities that participants joined are shown in Table 5.3.

Table 5.3 Courses, Trainings, Workshops, and Conferences or Trips Attended or Participated.

Question 6	%
Trainings and Courses	26
Permaculture Course	13
Ecovillage Design Education	4
Environment Training, sponsored by The Scientific and Technological Research Council of Turkey (TÜBİTAK)	1
Conference, Seminar, Panel, Symposium, Congress, Forum	14
ICOVACS 2008: International Conference on Value Chain Sustainability, 12-14 November 2008, İzmir	1
Workshops	13
Dragon Dreaming Workshop with John Croft on Planning for Sustainability (in Middle East Technical University in Ankara, Turkey 2009)	2
Ecological Architecture (and Natural Construction Workshop in Bayramiç	2
Meetings, Conventions	7
Turkey Permaculture Meeting 2011 in Bayramiç	4
Courses in University	7
ID 724 Product Design for Sustainability Course (in Department of Industrial Design, Middle East Technical University in Ankara, Turkey)	1
ELE 565 Sustainability Course (in Middle East Technical University in Ankara, Turkey)	1
Trip, Excursion, Camp	4
DBB Doğal Bilinçli Beslenme Group (Natural Nutrition Conscious Feeding Group for Ankara) Excursions	1
Festivals	3
Seed Exchange Festival (in Bayramiç 2011) (in Seferihisar)	2
Projects	1
Voluntary Work	1
Other Activities	10

5.1.4 SUDPs that are Used in General

Question 7 was on which SUDPs are **used in general**. 221 participants responded to this open-ended question. Most of the participants stated that they use beverage packaging, and secondly paper napkins or paper towels, thirdly food packaging, and fourthly plastic or paper beverage cups. The percentages of the types of SUDPs that participants use in general are shown in Table 5.4.

Table 5.4 SUDPs are used in general (Open-ended Question 7).

Question 7	%
Beverage packaging	
PET bottles 34%	67
Bottle, plastic bottle, milk bottle, tin beverage cans, etc. 33%	
Paper napkin / paper towel	52
Food packaging	35
Plastic / paper beverage cup	35
Plastic bag	30
Toilet paper	22
Hygienic Pad / tampon	18
Wet wipe	17
Plastic fork, spoon, knife, stirrer	17
Plastic / Paper plate	12
Personal cleaning / care products	9
Other packages (Box etc.)	9
Plastic gloves	9
Cleaning materials packaging	9
Stretch wrap	8
Garbage bag	7
Newspaper / magazine	6
Razor / razor blade	6
Batteries	6
Drinking straw	5
Cotton swabs (buds)	5
Diaper	5
Other Medical equipment / materials	5
Plastic refrigerator bag	5
Stationery products (Pen, glue, post-it, etc.)	4
Paper (A4 , A3, etc.)	3
Aluminum foil	3
Condom	2
Dental floss	2
Toothpick	2
Overshoe (Galosh)	1
Bus ticket / road ticket	1

Question **20.a** was also about the SUDPs that are **used in general**, parallel Question **7** (see above). 186 participants responded to this question by marking the multiple-choice list given in the survey. Most of the participants elected from the list that they mostly use toilet paper, the second and third ones were food packaging and beverage packaging, and the fourth was plastic bag.

Items that were mentioned by the participants like plastic / paper plate, newspaper or magazine, razor / razor blade, aluminum foil, and stationery products (pen, glue, post-it, etc) were not on the list provided in the survey on the multiple-choice list. That is why they do not appear in Table 5.4. On the other hand, items such as paper bag, coffee filters, cupcake wrappers, and party decorations were on the list; however they were not recalled by the participants when asked in the open-ended question 7.

When asked as open ended, participants remembered less of the SUDPs, while when asked as multiple-choice later in the survey, more of the items were selected. In the answers of open-ended question 7, toilet paper was found 22%, and personal cleaning and care products 9% (in total 31%); whereas, toilet paper was 95% when asked as multiple-choice. Toilet paper was possibly not even regarded as a SUDP; that is why participants did not recall when it was asked as an open-ended question.

The percentages of the types of the SUDPs that participants used in general are shown in Figure 5.1.

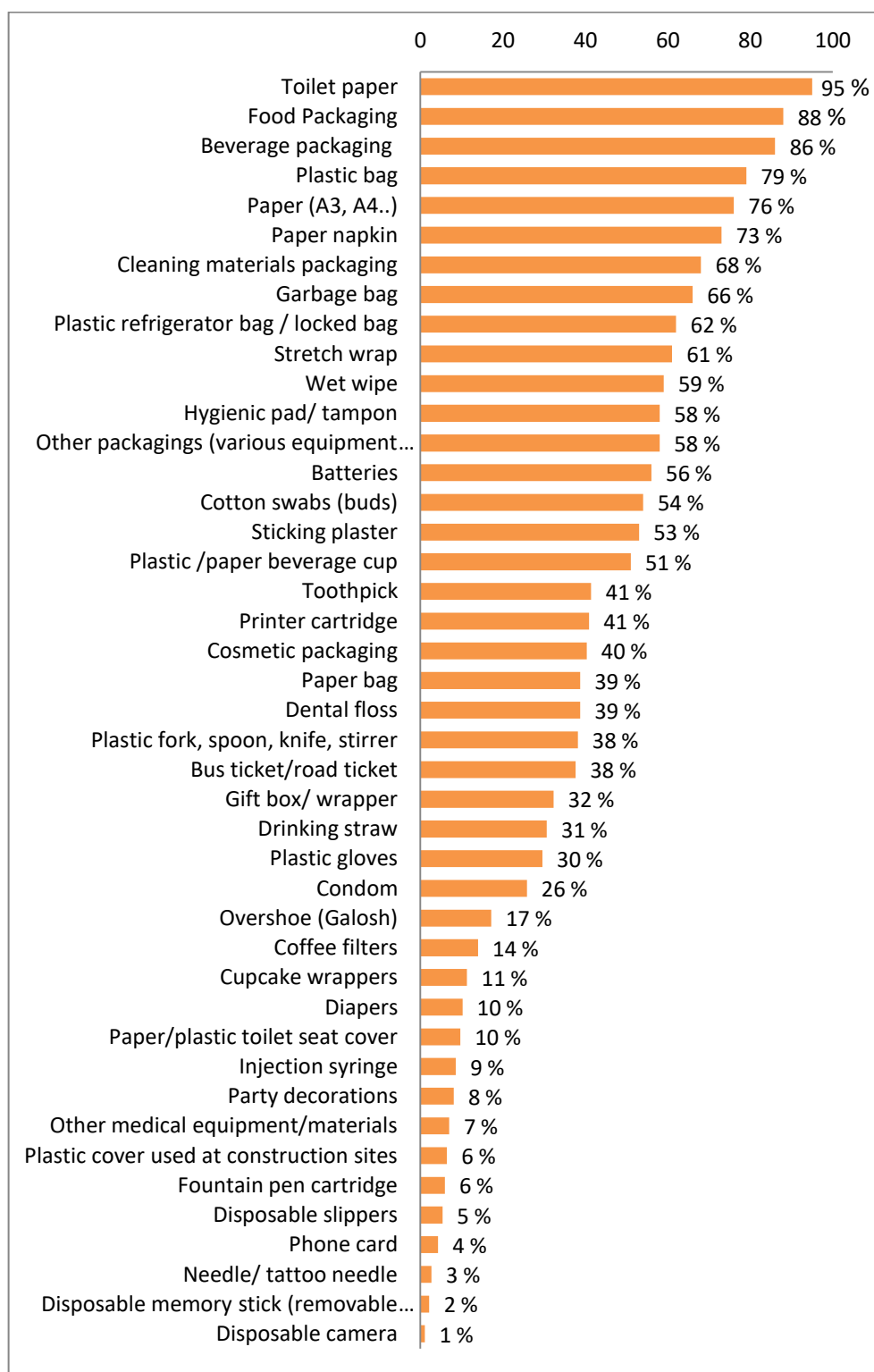


Figure 5.1 SUDPs that are used in general (Multiple-choice Question 20.a)

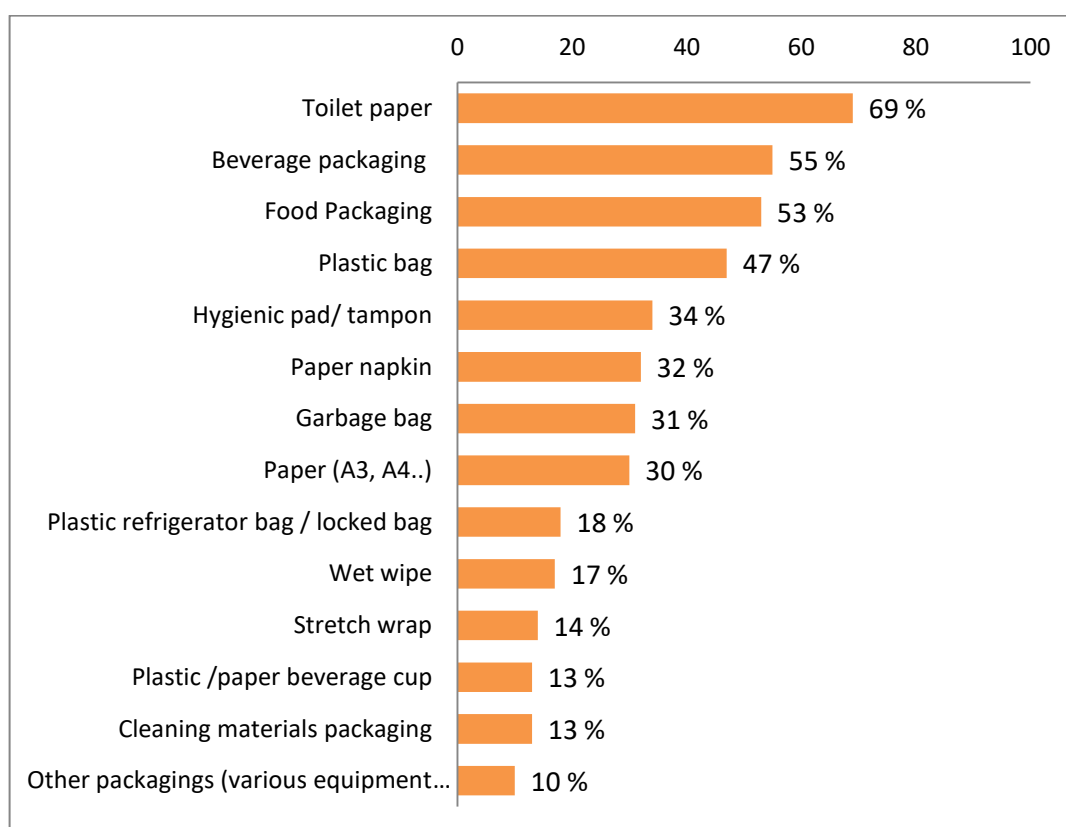
5.1.5 SDUPs that are Used Most in Amount

Question 8 was an open-ended question on the SUDPs that are **used most in amount**. 219 participants responded. Most of the participants declared that they use beverage packages, then the paper napkins or paper towels; third one was toilet paper, and the forth was plastic bag. The percentages of the types of the SUDPs that participants use most in amount are shown in Table 5.5.

Table 5.5 SUDPs that are used most in amount.

Question 8	%
Beverage packaging PET bottles 19% Bottle, Plastic bottle, Carton, Tetra Pak, etc. 18%	37
Paper napkin / paper towel	25
Toilet paper	16
Plastic bag	15
Plastic / paper beverage cup	13
Food packaging	12
Hygienic Pad / tampon	10
Wet wipe	7
Medical equipment / materials	5
No, I do not use frequently.	2

The multiple-choice Question 20.b was also about **the most frequently used** SUDPs, parallel to the open-ended Question 8 (see above). 186 participants responded to this question. Participants were asked to select items as the 5 most frequent used ones. Most of the participants elected toilet paper, the second and third were beverage packaging and food packaging, and the fourth one was plastic bag. The percentages of the SUDPs that participants use the most are shown in Figure 5.2.



* 10% and above are included in the graph.

Figure 5.2 SUDPs that are used most in amount (Multiple-choice Question 20.b).

Differences between the replies occurred (as in Section 5.1.4), according to either asked in the open-ended question or multiple-choice list given; since the same question is asked in both ways. The percentage of beverage packaging is found to be 37% in the open ended version, while asked in multiple-choice format, answered by 55% of the participants. This is because, more participants recalled SUDPs when they are confronted with the multiple-choice extensive list at the end of the survey.

5.1.6 SUDPs that are Encountered Most in Amount

Question 9 was about which SUDPs were **encountered most in amount**, regardless of whether the participants used these products or not. 208 participants replied to this question. Most of them stated that they encounter beverage packages (mostly

PET bottles), secondly plastic bags, thirdly plastic or paper beverage cups, and then plastic forks, spoons, knives, or stirrers. The percentages of the SUDPs that participants encountered most in amount are shown in Table 5.6.

Table 5.6 SUDPs encountered most in amount.

Question 9	%
Beverage packaging	72
PET bottle 47%	
Bottle, plastic bottle, Carton, Tetra Pak, etc. 14%	
Tin Beverage can 11%	
Plastic bag	34
Plastic / paper beverage cup	32
Plastic fork, spoon, knife, stirrer	22
Plastic / paper plate	14
Paper napkin / paper towel	13
Food packaging	10
Diaper	9
Medical equipment / materials	8
Wet wipe	8
Hygienic Pad / Tampon	5
All of them	1

5.1.7 SUDPs that are Re-used

Question 10 was an open-ended question about whether there are any SUDPs that are **re-used**. 215 participants responded to this question. It was seen that beverage packaging was the mostly re-used products, followed by plastic bags and then food packaging. However, participants who do not re-use any of the products were 12%. The percentages of the products that participants re-use are shown in Table 5.7.

Table 5.7 SUDPs re-used.

Question 10	%
Beverage packaging Bottle, plastic bottle, wine/milk bottle, etc. 43% PET bottles 29%	72
Plastic bag	36
Food packaging Others 21% Jar 10% Metal food package 1%	32
No, none of them	12
Other Packaging (Gift box, cardboard box, etc.)	9
Plastic /paper beverage cup	8
Plastic fork, spoon, knife, stirrer	7
Plastic / paper plate	4
Paper	3

5.1.8 SUDPs that are Kept and Cannot be Thrown Away

Question **11** was about whether there are any single-use disposable products that are **kept and cannot be thrown away**. 220 participants responded to this question. Most of the participants stated that they keep none of them. The products that were kept the most were found to be food packaging, beverage packaging, and various packages such as boxes, and then plastic bags. The percentages of the SUDPs that participants keep and cannot throw away are shown in Table 5.8.

Table 5.8 SUDPs that are kept and cannot be thrown away.

Question 11	%
No, none of them	39
Food packaging Others 13% Jar 5%	18
Beverage packaging Bottle, plastic bottle, wine / milk bottle, etc. 8% PET bottle 6%	14
Other Packaging (Gift box, cardboard box, etc.)	9
Plastic bag	9
Newspaper / magazine	4
Plastic / paper beverage cup	3
Paper	2
Plastic fork, spoon, knife, stirrer	2
All of them	2

5.1.9 Types of Carriage Bags

Question **15** was about which **carriage bags** are used, when going to any kind of market or shopping, such as plastic bags, cloth bags, paper bags, string bags. 208 participants responded to this question. Most of the participants were found to be using plastic bags, secondly cloth bags, thirdly their own bags or backpacks or sports bags. The percentages of the types of carriage bags preferred in shopping are shown in Table 5.9.

Table 5.9 Carriage bags that are used.

Question 15	%
Plastic bag	56
Cloth bag	48
Own bag or backpack / sports bag	15
String bag	14
Paper bag	13
Plastic bag re-used repeatedly	6
Eco-bag / (plastic) re-usable market bag	5
Handcart / shopping trolley	3
All of them	2

5.1.10 SUDPs that are Found the Most Important

Question 12 was about the single-use disposable products are **the most important**, the most prominent ones in participants' life; and whether there are any of them which are seen as inevitable or indispensable. 216 participants replied to this question. Most of the participants replied as none of them being important. The products that were found the most important are paper napkins or paper towel, beverage packaging, toilet paper, and then hygienic pads or tampons. The percentages of the SUDPs that participants found the most important are shown in table 5.10.

Table 5.10 SUDPs found the most important.

Question 12	%
No, none of them	24
Paper napkin / paper towel	17
Beverage packaging PET bottle 6% Tetra Pak, water / milk bottle, etc. 5% Glass bottle 4%	15
Toilet paper	13
Hygienic pad / tampon	13
Medical equipment / materials	6
Plastic bag	5
Plastic / paper beverage cup	4
Wet wipe	4
Paper	4
Diapers	3
Stretch wrap	3
All of them	1

5.1.11 SUDPs that are Found the Most Problematical

The open-ended Question 14 was about the SUDPs that are **the most problematical** in terms of ecological concerns. 180 participants responded to this question. Most of

the participants replied as the most problematical SUDP being beverage packaging (mostly PET bottles), secondly plastic bags, thirdly plastics or plastic containers or packages, and fourthly plastic or paper beverage cups. The percentages of the SUDPs that participants found the most problematical are shown in Table 5.11.

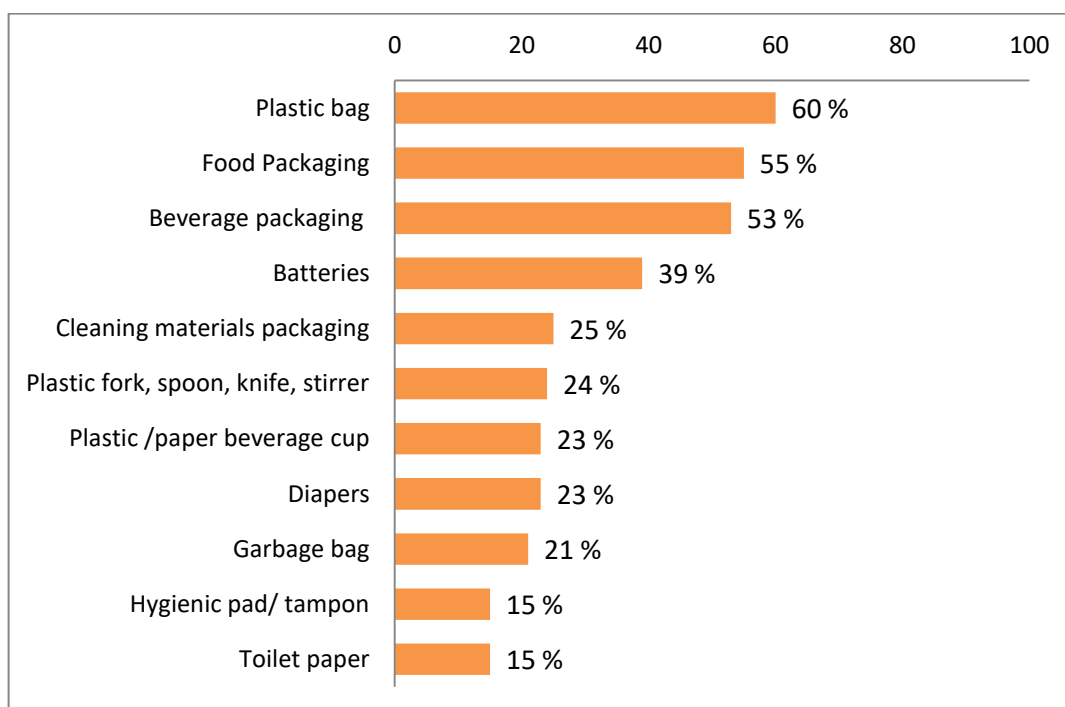
Table 5.11 SUDPs found the most problematical.

Question 14	%
Beverage packaging PET bottles 25% Glass bottles 5%	30
Plastic bag	28
Plastics / Plastic containers / packages*	24
Plastic / paper beverage cup	11
Batteries	7
Plastic fork, spoon, knife, stirrer	6
Paper napkin / Paper towel	4
Diaper	4
Packages**	4
Hygienic pad	3

*Plastics (plastic containers / packages) were subjected to a different classification according to its material by the participants. 31 participants (17%) referred to plastics, and 13 participants (7%) referred to plastic containers or packages.

**Packages were mentioned as a general category by the participants. 7 participants stated that “excessive packaging” or “packages occupy more space than the product itself”.

The multiple-choice Question **20.c** was also about the single-use disposable products that are **the most problematical**, parallel to Question **14** (see above). 183 participants responded to this question. Most of the participants chose plastic bag, and food and beverage packaging, then batteries. The percentages of the SUDPs that participants found the most problematical, gathered from the given multiple-choice list are shown in Figure 5.3.



* 10% and above are included in the graph.

Figure 5.3 SUDPs found the most problematical (multiple-choice Question 20.c).

5.1.12 Problems with SUDPs

Question 13 was whether there are any **problems** with SUDPs. 175 participants responded to this question. Most of the participants stated that they think that pollution and environmental / natural damage are problems with these products. Secondly, they think that SUDPs are not being (properly) recycled. Thirdly, there is a waste or disposal problem, and wasteful, unnecessary or too much consumption. The percentages of the types of problems with SUDPs according to the participants are shown in Table 5.12.

Table 5.12 Problems with SUDPs.

Question 13	%
Pollution, environmental / natural damage	26
Not being (properly) recycled	21
Waste / disposal	13
Wasteful / unnecessary / too much consumption	13
Damage to human (and living things) health	8
Design / functionality / aesthetics	6
Exploitation of nature / resources	6
Produced too much / increase in use / being widespread	5
The very existence of them / their <i>being single-use</i>	5
No problems	5

5.1.13 Reasons of SUDPs for Being Widely Used

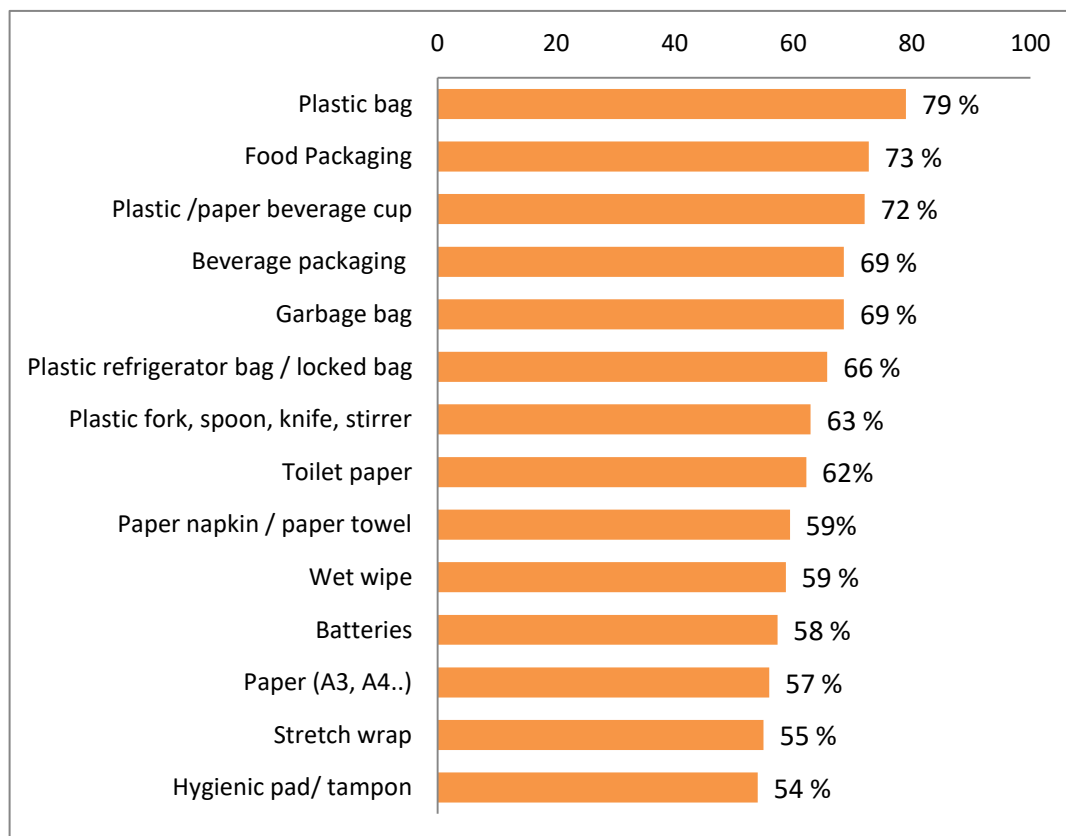
Question 16 was about the **reasons** of disposable products for being **widely used**. 189 participants responded to this question. Responses indicated that participants mostly thought that SUDPs are practical, secondly that they are cheap; thirdly, that people are unaware or are unconscious about environmental protection, and that SUDPs are convenient. The percentages of the participants' ideas on the reasons of the SUDPs for being widely used are shown in Table 5.13.

Table 5.13 Reasons of SUDPs being widely used.

Question 16	%
Practical	25
Cheap	17
Unawareness / Unconsciousness (about environmental protection)	13
Convenient	12
Production cost is low	11
No need for cleaning / washing	10
Laziness / take the easy way out	9
Ease of use	8
Easy to access / Accessible	8
Consumption habits, Hard to change habits, Manipulation of habits	8
Irresponsibility / insensitivity (towards environment)	7
Speedy / Hectic lifestyle / Speed of life	7
Alternatives are disadvantageous / unfavorable	5
Ease of carrying / no need to carry	5
No other / or not enough alternatives (not knowing the alternatives)	5
The image (Perception) of easiness, Easy way out	5

5.1.14 Reasons for Using or Not Using the SUDPs, and Alternatives that are Used

Question **21** was about the reasons for using or not using SUDPs; and / or the alternatives that are used instead. 143 participants responded to this question. It was a multiple-choice list, and there was space provided for explanations if needed. Most of the participants elected plastic bags, secondly food packaging, and thirdly, plastic / paper beverage cups, from the list to write their explanations about the reasons for using or not using them, and state alternatives. The percentages of these SUDPs that participants chose are shown in Figure 5.4.



* Above 50% are included in the graph.

Figure 5.4 SUDPs that participants chose to explain the reasons why they use or do not use, and the alternatives to SUDPs.

Within the same question, some of the participants filled up the explanations as to their reasons for using SUDPs, not using them, or the alternatives which they used instead. Firstly, in Figure 5.5 percentages are presented for which SUDPs that the reasons are indicated for using. Secondly, in Figure 5.6 percentages are shown for which SUDPs that the reasons are given for not using. And thirdly, in Figure 5.7 percentages are presented for which SUDPs that the alternatives are used instead. Percentages (for Figure 5.5, Figure 5.6, and Figure 5.7) are calculated based on the explanations (number of statements) of responding participants.

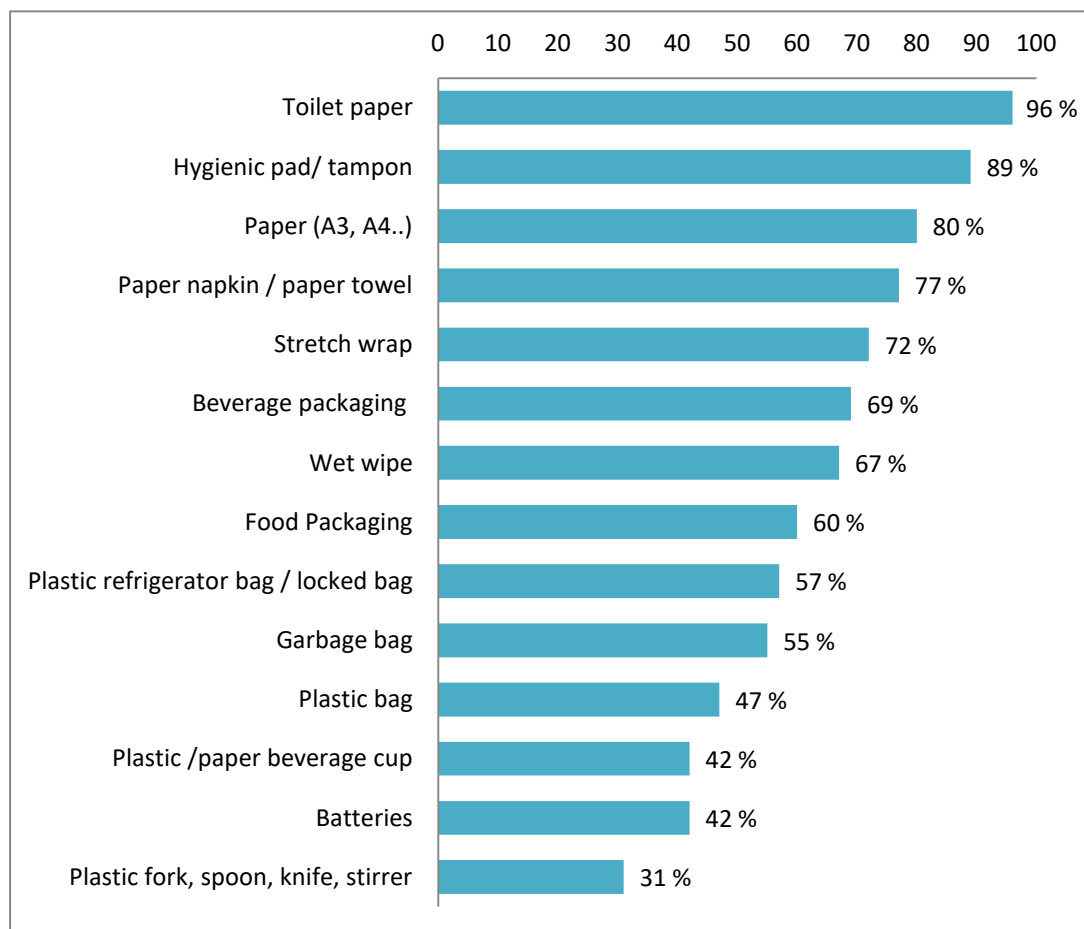


Figure 5.5 SUDPs for which reasons are given for using.

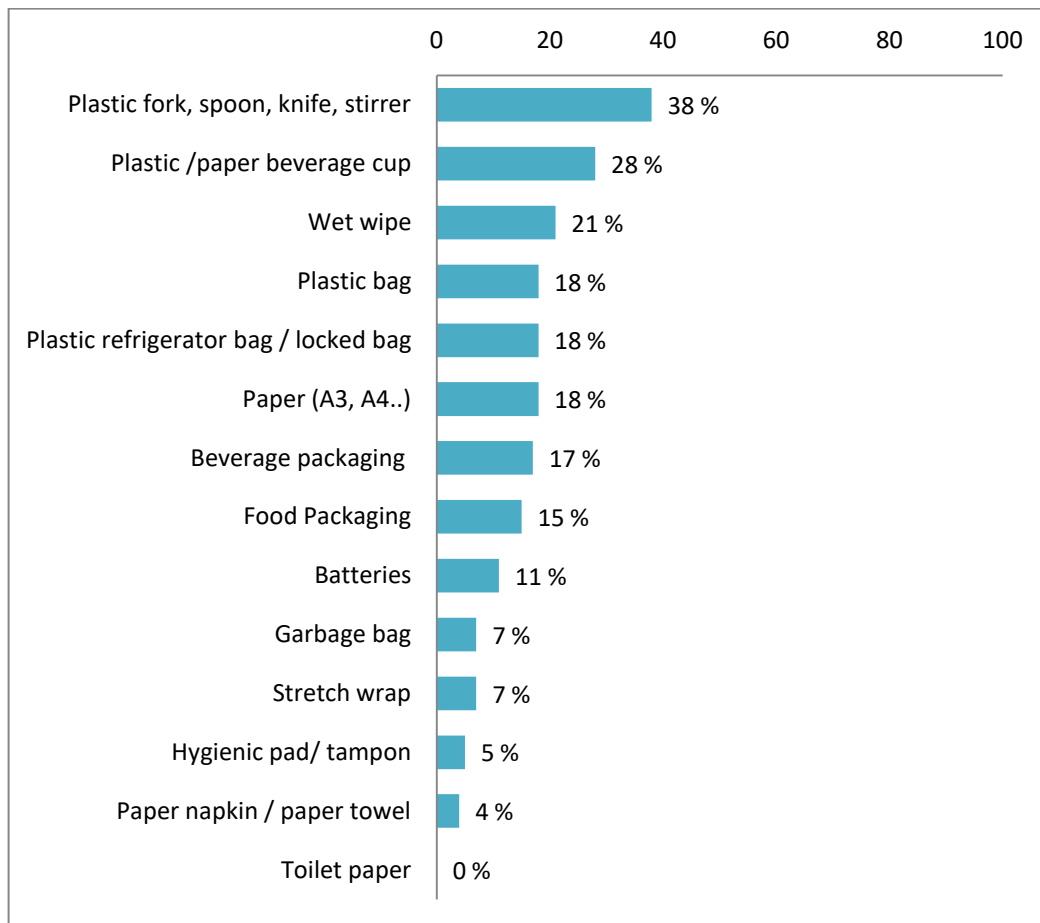


Figure 5.6 SUDPs for which reasons are given for not using.

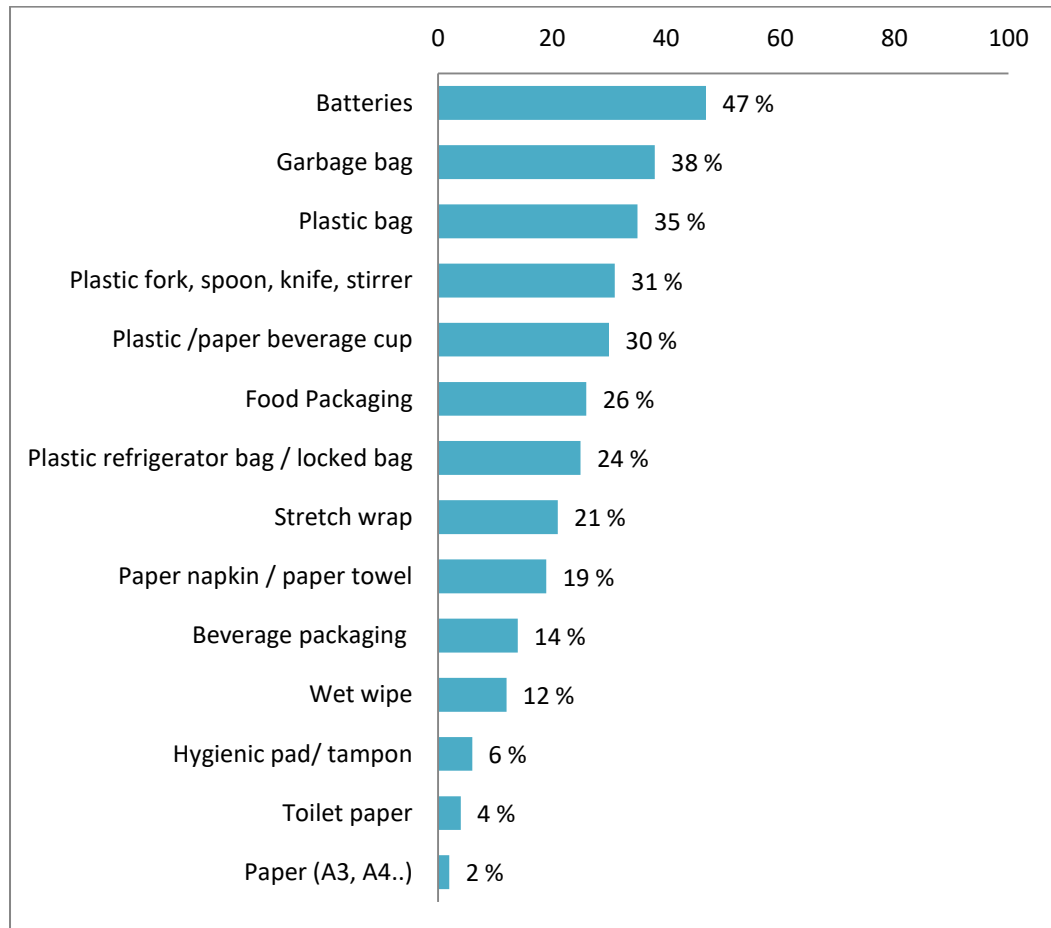


Figure 5.7 SUDPs for which alternatives that are used instead.

5.2 Summary Results of the Survey in Turkey

On the Classification of SUDPS

Different approaches of categorization can be utilized when looking into the SUDPs. Regarding the answers given to the open ended questions (7-12 and 14), it was seen that participants tend to classify SODPs according to their materials (such as glass, plastic, metal, etc.), or according to their forms (such as box, bottle, etc.) or

according to their functions (such as food or beverage packages or containers, etc.).

Table 5.14 summarizes the classification made by the participants.

Table 5.14 Classification of SUDPs made by the participants

Categories	Definitions and Examples
Materials	<p>This category is formed by according to different materials SUDPs are made of.</p> <p>For instance, plastic implies many types of products, from food and beverage packages to cleaning or cosmetic packages, or medical devices such as syringes, galosh or plastic gloves. As for paper products, they can be from many different areas, such as toilet paper, napkin, or A4, A3 papers to write or print on, or newspapers and magazines.</p>
Forms	<p>This category is created by according to various forms of SUDPs.</p> <p>For example, bottle might refer to beverage bottles, oil bottles, or detergent bottles, etc. This category of bottles might be made of different materials such as plastic, glass or metal; and serving for different functions. As for Box, it represents possibly of several kinds of functions, made of cardboard, metal or plastic.</p>
Functions	<p>This category is shaped by according to which purpose the item serves, such as medical use, food or beverage packaging, or carrying.</p> <p>For instance, container refers to a large group of products, made of different materials and different forms, such as dishes, cups, bottles, boxes, or bags.</p>

In this study, classification according to functions of SUDPs was found appropriate and employed, which has five main groups shown in Figure 5.8:

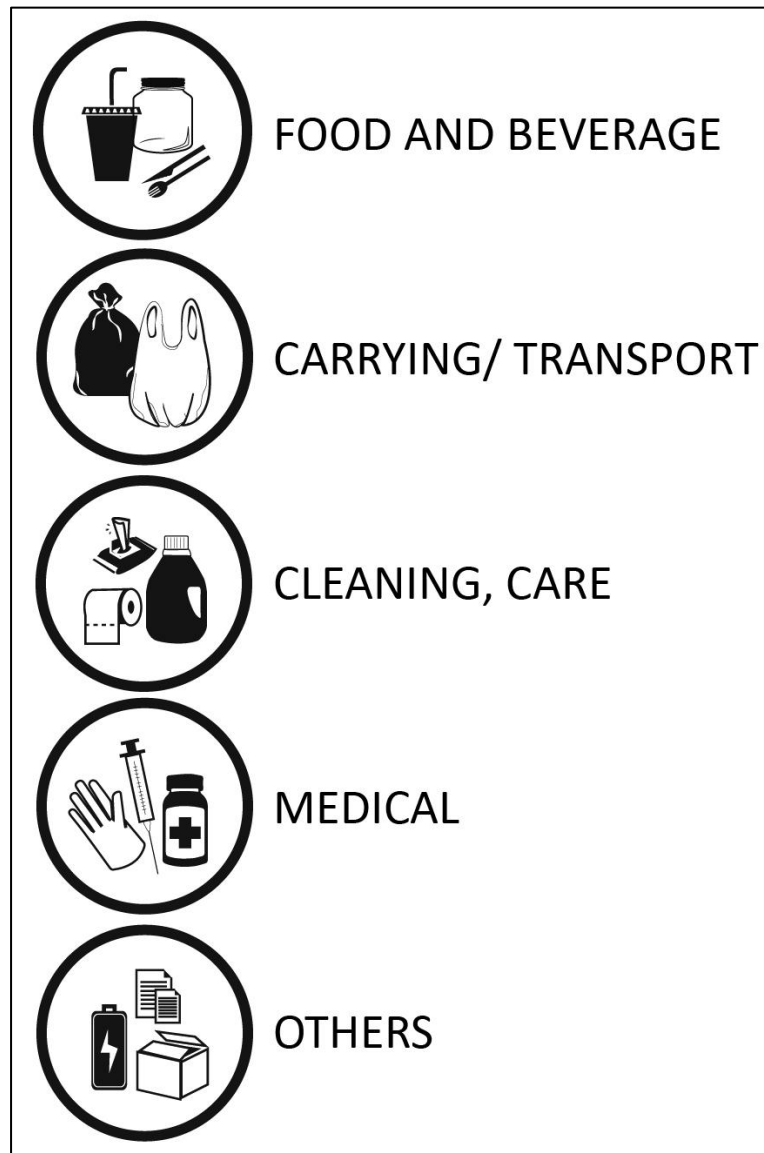


Figure 5.8 Classification according to functions of SUDPs (Designed for this study, Graphic design by Derya Gürs 2015).

5.2.1 Food and Beverage

Food Packaging was considered as the most kept and cannot be thrown away SUDP type. They were one of the most re-used SUDPs; particularly mentioned ones were plastic food packages, yogurt containers, and jars, etc. Food packages were also

considered as one of the most problematical products, and one of the most used in amount.

Beverage packaging was mentioned as the most used SUDPs in amount, and the most problematical. They were considered to be the most re-used, and the second most kept and cannot be thrown away SUDP. **PET bottle** was often mentioned as a beverage packaging, especially for water. It was given special importance by the participants. PET bottle was the most encountered SUDP in amount; while being regarded as the second most problematical.

Plastic / paper beverage cups were found to be one of the most problematical SUDPs, and one of the most encountered in amount. **Plastic fork, spoon, knife, stirrer** were the items for which reasons were given for not using most, and they were found to be among the most encountered SUDPs in amount.

Food Packaging

60% of the explanations uttered by participants were about the reasons for using food packaging see Figure 5.5 in Section 5.1.14). 26% of the explanations were that products are sold as such, and the necessity that the presentation of food products bring. 14% of the explanations were that they are indispensable or inevitable. 6% of the explanations stated that there are no alternatives. For example one participant uttered “since I eat, I inevitably buy materials, and these are all in packages.” 2% of the explanations of use were in order to eat quickly.

As for the explanations on reasons for not using, 13% of the explanations were about using them rarely or trying not to use. On the alternatives to food packaging, 16 % of the explanations were trying to buy unpackaged or open food if available, or buying from outdoor markets. 7% of the explanations stated the preference for glass packaging. Nevertheless, the statements did not explain whether these glass food packages or containers were single-use or not.

Beverage Packaging

69% of explanations were the reasons for using beverage packages (see Figure 5.5 in Section 5.1.14). Reasons for using are as follows: 16% of the explanations stated that beverages are sold this way. 15% of the explanations were that they find beverage packaging as indispensable or inevitable. 10% were asserting that there are no alternatives. One participant stated that there are no re-usable lightweight alternatives for carrying water; another participant said that when buying and storing they are inevitable, continued as “we use glass bottles, and these glass bottles are also non-refundable indeed, it means that it is possible to throw these bottles away if we want.” 13% said that they prefer glass beverage packages. 4% of the explanations were on the use outdoors, and 4% were on the use because of hygiene.

16% of the explanations were about using rarely or trying not to use beverage packaging. 7% of the explanations of alternatives to beverage packages were – mostly instead of PET bottles– using (water) flask or bottle as much as possible; 3% carry their own containers or their glass with a lid. One participant stated that “I carry my own water flask with me, but it is not enough.”

Plastic / Paper Beverage Cup

Answers given for the reasons of using plastic or paper beverage cups were 42% (see Figure 5.5 in Section 5.1.14). There were explanations mainly about the outside usage, 8% were on using in picnic or party; 8% using at outdoors, in cafe shops, school canteens or in fast-food restaurants; 6% were using on journeys; and 5% were using or have to use in their workplace. 5% of the statements were on the use when there are no other alternatives, and, 4% were indispensable or inevitable. 5% of the explanations were that there is no need to clean, or when there is no opportunity to wash the dishes, 4% were stating that they are either practical or easy to use; and 3% were using in crowded situations.

17% of the explanations indicated that they were not using any; and 14% were using rarely or trying not to use. As for the reasons for not using, 3% were stating that they are damaging to both humans and the environment. One participant declared that “I never use since I find them unnecessary and harmful to the environment.” For the alternatives to plastic / paper beverage cups, 17% stated their preference for glass; whereas 10% carry a cup, their own PET bottle or a metal mug with them; 7% use thermos, re-usable plastic or silicon cup, or “real ones”, and 5% prefer ceramics or porcelain.

Plastic Fork, Spoon, Knife, Stirrer

Replies given for the reasons of using plastic forks or spoons, etc. were 31% (see Figure 5.5 in Section 5.1.14). It was found that 7% of the explanations were about using at picnic and 7% at outdoors, canteens, or at a journey. 5% indicated that respondents use when there are no alternatives. 4% stated that they are practical, and 7% stated that they are used at work as it is practical during short meal breaks.

Answers given for the reasons of not using were found to be 9%, stating that respondents use rarely or try not to use plastic fork, spoon, knife, or stirrer; while, 32% do not use, or do not need to. One participant called them “the most unnecessary thing on the earth”; likewise another participant said “sloppy utensils” for them. 21% of the explanations for the alternatives to plastic fork, spoon, knife, or stirrer were metal ware. 9% of the explanations stated that respondents use either washable re-usable versions, or use regular or “real ones”. One participant uttered that “I use metal; I carry them along with me.” Another participant said that “I create miracles with pocket knife.”

Stretch Wrap

Answers given for the reasons of using stretch wrap constituted 72% of the explanations (see Figure 5.5 in Section 5.1.14). 29% of the statements were about using stretch wrap to protect or keep food (in refrigerator). Two participants stated that they use to avoid odor in the refrigerator. Another participant stated that food

containers in the refrigerator are sometimes not enough. 8% of the statements were on the use when there is no lid on the food container. 4% of the explanations were about using in order to keep the food fresh. One participant stated that “I use them to store food for a longer time, but I use only a limited amount of stretch film.” One other participant uttered that “I cannot store anything without wrapping with stretch film in the refrigerator. Perhaps re-usable plastic containers can be used. But for example, how could I store a dish cooked in ovenware in a plastic container? Stretch wrap is inevitable.” 6% of the explanations stated that respondents find stretch wrap to be indispensable / inevitable; whereas, 4% stated that there are no alternatives. 6% of the explanations were that they are practical, and 5% indicated that they ease the life or they are functional. Two participants stated that they use in order to prevent accumulating excess dish to wash. 23% of the statements were on using stretch wrap rarely.

Statements of the participants for not using stretch wrap were 7%. As for the alternatives to stretch wrap, 17% of the explanations indicated that (glass) containers with a lid are used; 10% indicated using flexible bonnets, or wrapping fresh herbs and such with a cloth, using a plate or covering with a glass lid, and using plastic or enamelware containers; while, 5% indicated using refrigerator bags or aluminum foil.

5.2.2 Carrying / Transport

Plastic bag was the second most problematical SUDP according to the participants, and the most used as a carriage bag. In addition, it was considered as the second most re-used one; and one of the SUDPs that is most kept and cannot be thrown away. Plastic bag was also the second most encountered SUDP in amount. For the carriage bags, the most prominent one was found to be plastic bags and the re-use of them. As for the alternative to plastic bags, cloth bags come forward.

Plastic Bag

47% of the explanations of the participants were the reasons for using plastic bags, such as using when they do not have a cloth bag with them (see Figure 5.5 in Section 5.1.14). 16% of the explanations of responding participants were using them for garbage after the initial use. 5% of the explanations were re-using before they are thrown away. One of the participants explained the use of plastic bags as “because of my irresponsibility, I could have a cloth bag or a string bag.” 8% of the explanations were statements on finding plastic bags as indispensable or inevitable. One participant declared that plastic bags are “almost impossible not to use”; likewise another said that “they are everywhere!” 5% of the explanations were that plastic bags are practical, easy, or easy to use. 3% of the explanations were that plastic bags are being used, since they are either biodegradable or recyclable.

The explanations for using less or trying not to use were 20%. Respondents that stated their reasons for not using plastic bags though were few: 4% of them said that they are harmful to nature or create pollution. As for the alternatives to plastic bags, 29% of the responding participants use or try to use cloth bag as much as possible; whereas 9% of them prefer backpack or their bags.

Garbage Bag

There were 55% of explanations of the participants on the reasons for using garbage bags (see Figure 5.5 in Section 5.1.14). 19% were on the fact that there are no alternatives, or they cannot find any alternatives. As one participant stated “I think there are no alternatives, because there will always be garbage. I think that they are more environmentally friendly than the normal plastic bags.” Another one stated that “Is there other option than using them inside waste basket? Unfortunately I continuously use. Even though I throw away the garbage as dry as possible, plastic bags from supermarkets would leak and become awful.” 10% of the statements indicated the garbage bag as indispensable or inevitable. 7% stated that respondents

prefer biodegradable, and 3% prefer recyclable ones. 5% of the statements were saying that they are practical, easy to use or functional.

5% of the explanations were on using rarely or trying not to use garbage bag. As for the alternatives, 43% of the statements indicated that respondents use plastic bags instead. One participant declared that “I use the plastic bags as garbage bags which I already somehow happen to have. I do compost in my garden, but still there is waste, and I have no other options than plastic bag.”

Plastic Refrigerator Bag / Locked Bag

57% of the explanations of the participants gave reasons for using plastic refrigerator bags (see Figure 5.5 in Section 5.1.14). 14% of the reasons for using are to keep or protect food. One participant uttered that “I use them for the products when we cannot store in the refrigerator otherwise. 5% stated that they are appropriate to freeze fresh produce; and 5% stated that they prevent odors from getting mixed or reeking in the refrigerator. 2% of the explanations stated that they are easy to use, or easy to divide food into portions. 13% of the respondents declared that they re-use them. 11% of the statements stated that they are practical, whereas, 3% stated that they are used for hygiene or cleanliness.

As for the explanations on the reasons for not using, 13% of the statements indicated that respondents do not use, or do not need to; 6% stated that respondents use rarely or try not to use plastic refrigerator bags or locked bags. As for the alternatives, 23% of the statements indicated that storage cups or glass jars were found to be alternatives, and 7% indicated plastic bags or other plastic food packages to be alternatives.

5.2.3 Cleaning, Care

The group of SUDPs related to convenience and hygiene were mentioned frequently. Such as, **paper napkin / paper towel** was the second most remembered item which is used in general when asked open-ended, and the second most used

one in amount. **Toilet paper** was the most used in amount, when asked in multiple-choice question. **Hygienic pad or tampon** was regarded as one of the most important SUDPs, and it was the second item for which most reasons were given for using.

Hygienic Pad / Tampon

89% of explanations of the participants were on the reasons for using hygienic pads or tampons (see Figure 5.5 in Section 5.1.14). 21% of the explanations indicated either that there are no alternatives, or that the alternatives are not known, or that the respondents have not tried other alternatives yet. 18% of the statements indicated that respondents find hygienic pads or tampons to be indispensable or inevitable. One participant acknowledged that “it is hard to give up on those. Perhaps it is not ethical to say so, but if you ask me what the invention of the century is, I would say hygienic pads.” Another participant stated that “I use; what else would I do?” One other participant declared that “I cannot even think otherwise, it would be very troublesome.” 6% of the explanations were on the impossibility of doing the old-style, as one participant said that “Is it possible to return to the old days! It is very difficult.” 20 % of the statements indicated that they are ‘practical, ease the life, functional, and time-saving’, or that they are easy to use, convenient, and comfortable. 14% of the explanations were on hygiene and 4% on their being healthy or cleanly. 5% of the explanations gave ‘need’ as a reason for use.

There were no replies for reasons for not using. Whereas, 3% of the explanations for the alternatives to hygienic pad or tampon were the use re-washable cloth pads; and 1% of them were the use of ‘the Moon Cup’ (re-usable and washable menstrual cup made from silicon).

Toilet Paper

96% of the explanations were the reasons for using toilet paper (see Figure 5.5 in Section 5.1.14). One participant stated that it “becomes a standard need.” 31% of the statements indicated that there are no alternatives; likewise, 17% stated that

respondents find toilet paper indispensable or inevitable. 12% of the explanations were about using for hygiene or cleanliness; 5% stated that they are practical, easy to use, or functional.

There were not any reasons stated for not using. 11% of the statements were on trying to use less or just enough. 3% of the explanations on the alternatives to toilet paper stated that when respondents are at home they use water from the bidet nozzle and cloth instead.

Paper Napkin / Paper Towel

Reasons for using paper napkin given by the participants were 77% (see Figure 5.5 in Section 5.1.14). It was found that 12% of the explanations stated that paper napkin / paper towel is practical. 11% indicated that it is used for hygiene or cleaning. One participant stated that it provides speedy and carefree cleaning. 8% stated that there are no alternatives, and 5% of the statements indicated that they find paper napkin indispensable or inevitable. One participant declared that “it is being single-use is the most appropriate thing.” Another participant explained the reason of use as “since washing clothes and towels is neither environmentally good.” 5% of the statements were found to be on the use in the kitchen, and 5% explained that it is used since respondents frequently need it for nasal flow. 5% of the explanations for use were the “need”. 5% indicated that it is used since it is useful or functional.

There were found no reasons for not using paper napkin / paper towel. 19% of the explanations were on using less. 22% of the explanations on alternatives to paper napkin were using cloth napkin or towels.

Wet Wipe

67% of the explanations were on the reasons for using wet wipes (see Figure 5.5 in Section 5.1.14). 17% of the statements of the participants were about the usage at places without the access to water or tap water; likewise 12% were about the usage

at outdoors, at work or at a journey. 12% stated that they are practical; whereas, 5% described them as convenient, functional, or easy to use. 11% of the statements were for cleaning, as one participant indicated that “they are used for cleaning hands after getting off from a bus or a minibus, or cleaning the handle of the shopping cart, or wiping the keyboard of the computer, etc.” 6% indicated usage for hygiene. 5% of the explanations were about using for baby or child.

10% of the explanations were on not using, or not needing to use. One participant declared that “they are very very unnecessary; they happen to exist to make money and to consume the resources.” 15% of the explanations were found to be on the less or rare usage. As for the alternatives to wet wipe, 11% of the explanations indicated washing hands.

5.2.4 Medical

Condom, sticking plaster, plastic gloves, injection syringe, needle / tattoo needle, and other medical equipments and materials (face mask, test kit, serum bottle, surgical cover, specimen cup, etc.) are classified under the group of medical SUDPs.

Very few respondents remembered medical SUDPs when asked as an open ended question. Whereas, asked as a list of multiple-choice, 53% of respondents stated that they use sticking plaster, 30% of them use plastic gloves, and 26% of them use condom. Medical equipments and materials were at the fifth ranking of importance: only with 6% of respondents.

5.2.5 Others

Batteries

The explanations of the reasons for using batteries were 42% (see Figure 5.5 in Section 5.1.14). It was found that 17% of the statements were the use for devices such as watches, remote controls, flash lights, toys, mouse, etc. 5% stated that there

are no alternatives. One participant declared that “I think there are no scientifically planned alternatives which consumers can prefer. That’s why people are continuously captivated to using them.” 4% of the explanations stated that respondents find batteries to be indispensable or inevitable. 5% of the statements were indicated as the “need”.

11% of the explanations were on using rarely or trying not to use them. Alternatives to batteries were rechargeable ones, which constituted 48% of the statements.

Paper

80% of the explanations were the reasons for using paper (see Figure 5.5 in Section 5.1.14). 9% indicated paper being used for writing, drawing or homework. 16% of the explanations stated that there are no alternatives. 14% of the explanations stated that respondents find paper to be indispensable or inevitable. One participant uttered that “in education, exam papers have to be kept; and paper is the only alternative for the legal documents.” 21% indicated that respondents use both sides. 10% of the statements indicated paper to be re-used as scrap. 5% stated that respondents do not throw them away before using every possible area.

Reasons for not using were found to be 18%, stating that respondents rarely use or try not to use paper. 14% stated respondents to be using less, or printing less. The explanations for alternatives were found to be 2%, indicating that respondents read from the computer screen instead of printing.

CHAPTER 6

STAGE 2: INTERVIEW STUDY

Semi-structured in-depth interviews about SUDPs use were executed in Turkey; interviewees were recruited among the survey participants. The research design and the process are explained in detail in Section 4.3. The interview guideline in Turkish is in Appendix E, and Appendix F in English. In Tables 6.1 and 6.2 are the questions that were asked at the interview:

Table 6.1 The questions that were asked at the interview Phase 1

Phase 1
1. Which SUDPs do you think are indispensable, and which ones you could give up or reject?
2. In what situations do you have to use these kinds of products, or do you prefer them?
3. Are there any situations when you try to avoid SUDPs? If yes, which ones? In what kind of situations and how?
4. Are there any SUDPs which you keep and cannot throw away or recycle? Do you save some things that are not useful now, in the hope that they might be useful some day?
5. Do you have any products especially preferred due to the packaging properties or avoided ones?
6. What are the benefits of the SUDPs in general, positive aspects, contributions to your life?

Table 6.2 The questions that were asked at the interview Phase 2

Phase 2
<i>On the three examples of SUDPs that are chosen by the participant:</i>
7. How do you acquire these three SUDPs that you bring along with you?
8. How many of these three products do you use in a month or week?
9. How do you relate with these SUDPs? How long do you keep these products? If you dispose them, how do you dispose? Do you re-use these products after their initial use?
10. Beyond re-use, do you re-use in different types, or re-contextualize these three products? (With cutting, giving another form? Which parts are re-used?)
11. How do you think your lifestyle is affected by using or not using these three SUDPs? (What are the advantages and disadvantages?)
12. What are the benefits of these SUDPs, and their contributions to your life?
13. How would it be if these objects were nonexistent? How would life be without them?
14. Are you searching for alternatives for these single use disposable products? What attempts have you done so far?
15. What are the implications for your daily life, if you are searching for alternatives or avoiding using these products?
16. How do you evaluate these three SUDPs in terms of speed, mobility, hygiene, comfort, and convenience?
17. In your daily life activities, how do you evaluate the SUDPs in general in terms of speed, mobility, hygiene, comfort, and convenience?

Interview Findings

The analyses revealed that the themes for the usage of SUDPs gathered around two main titles. These are Use Patterns of SUDPs and Properties of SUDPs, presented in Table 6.3:

Table 6.3 The Themes of findings of the interviews

Use Patterns of SUDPs
Locations and situations of using SUDPs
Locations of using SUDPs Situations of using SUDPs
Indispensable / Rejected / Avoided or reduced SUDPs
Indispensable SUDPs and reasoning Rejected / Avoided SUDPs Could be rejected / given up SUDPs Reduced SUDPs
Preferences about packaging for the case of SUDPs
Not much affected from packaging properties Preferred types of packaging and reasoning Types of packaging that are not preferred and reasoning Preferred unpackaged or not pre-packaged
Alternatives of SUDPs
Alternative products for SUDPs and reasoning Lack of alternative products or alternative usages for SUDPs Reasoning for not using alternative products for SUDPs
After initial use of SUDPs
Re-use of SUDPs Keeping SUDPs Problems of storage, accumulation and maintenance of kept SUDPs Throwing away SUDPs after keeping for potential re-use Giving SUDPs to someone else Keeping special examples of SUDPs Not keeping any SUDPs / Against keeping Not keeping much SUDP / Keeping a limited number of SUDPs Keeping many SUDPs Keeping SUDPs for their potential for re-use
Properties of SUDPs
The positive properties of SUDPs
Hygiene Convenience Comfort Practicality Speed Mobility Accessibility Spontaneity
Negative Properties of SUDPs
Being uncomfortable with / Disturbed from SUDPs Debatable (seemingly positive) properties of SUDPs

6.1 Use Patterns of SUDPs

6.1.1 Locations and Situations of Using SUDPs

Some of the participants explain their use of SUDPs within various circumstances. The instances of *locations and situations where SUDPs are used* help to reveal the motives behind why SUDPs are widely accepted and being used.

6.1.1.1 Locations of Using SUDPs

Eleven participants (out of sixteen) point out the differences of using SUDPs outdoors and domestic use, they are compared and contrasted. Accordingly, it is stated that SUDPs are usually used when not at home, namely at office, school or outdoors more often. For example, when using public toilet, P11³ prefers bringing her own paper napkin and single use soap, and P8 chooses to use closet toilet seat cover wherever present. Likewise, P4 states that:

*P4: I try to use things such as tissue paper outdoors -not at home- where I do not have access to cleaning materials.*⁴

Similarly, P15 and P16 define their need for use of wet wipes, PET water bottles, and daily hygienic pads as only in ‘urgent’ situations at outdoors. For P12 too, at outside, things that people use preferably are single use.

6.1.1.2 Situations of Using SUDPs

There is an aspect of being *unaware* when it comes to the use of SUDPs; as P10 and P16 mention that they do not realize how many types of SUDPs they use until they

³ The participants of the interview study are mentioned as P11 in place for Participant number 11.

⁴ The direct quotations from the participants of interviews are translated by the author. The original quotation are in Appendix G.

have confronted with the list of SUDPs in this research. Likewise, P4 thinks that they are “too obvious” that we might be using them unconsciously.

P16: The problem is that, I am not aware of most of them. I only have a guilty conscience about those that I am aware of.

Another issue is the ‘exposure’ to SUDPs: P1 is exposed to SUDPs in spite of her own choice. She claims that she cannot avoid them since SUDPs are forced in certain places or situations. For example, in long distance buses, water is served in plastic beverage cups. According to her, packages come with products by default. No options are offered whether packages are desired or not. This also refers to ‘the lack of alternatives’ issue (discussed in Section 6.1.4.2), and to being disturbed by SUDPs (as discussed in Section 6.2.2 Negative Properties of SUDPs).

Another mentioned topic is that there are certain SUDPs that are seen as ‘socially needed’. For instance, P2 thinks that living in a society requires certain SUDPs at home, even if not needed personally. She claims that she needs to have them present for other people, such as paper tissues.

Another concern is that ‘becoming a habit’, which is expressed by P5 with a variety of examples:

P5: in general, pursuit of changing lifestyle has increased. We have more long term pursuits of escaping from city life. Since changing habits in that situation using less or none of disposable objects may be possible. [...] Things such as drinking straws are actually interesting examples because they create new habits. After new habits are formed they seem to be necessary. Our children want to drink milk with a straw, it seems attractive to them. But if it was not there they would drink the milk anyway. A culture is formed, a habit. [...] For disposable slippers, I would say they are for very urgent situations, but it always starts with urgent and becomes a habit I would not be surprised if everyone started using disposable products 30 years from now.

6.1.2 Indispensable / Rejected / Avoided or Reduced SUDPs

6.1.2.1 Indispensable SUDPs and Reasoning

Fifteen participants state that they have to use certain SUDPs. Though, as P5 states, generally none of them are actually indispensable or unavoidable; in certain situations there are some products which one cannot stay away from. For P5, it is difficult to give SUDPs up in city conditions. The locations of SUDP use are compared (as discussed above in Section 6.1.1.1); in this case, as urban versus rural:

P5: Since we cannot change everything as individuals and as long as we choose to live in certain environments, some things seem to be indispensable.

Especially, most of the participants mention medical and cleaning products; for instance, toilet paper as indispensable. P14 thinks that it is easier to give up the products used at home compared to medical products. The rest of the SUDPs other than toilet paper, hygienic pads, diapers, toothpicks, etc. seem to be dispensable for her.

P8 defines toilet paper as irreplaceable. Similarly, three participants state that paper napkins are indispensable; P4 sees them as important.

Ten participants state that plastic bags are unavoidable; for example, P5's living conditions are compelling for getting plastic bags from supermarkets. PET water bottles are found to be as indispensable by seven participants. P12 and P13 state that they have to buy food package, because food is presented as such. Three participants use plastic or paper beverage cups unavoidably: for instance, P13 declares that since she has no time, she unavoidably buys coffee in paper cup to take it along:

P13: I have a caffeine addiction that is something I am obligated to do. I am obligated, because I do not have the time to sit there for a long time while I have my coffee.

As a result, hygiene, convenience, and accessibility of SUDPs seem as significant factors for considering SUDPs as inevitable. One other justification for seeing SUDPs as indispensable lies in perceived lack of alternatives.

6.1.2.2 Rejected / Avoided SUDPs

Eleven participants reject or avoid various SUDPs, for example four participants do not use stretch film. Likewise, three participants reject the offers of wet wipes or plastic cutleries. Whereas, P3 asserts that she avoids over-packaged food items, such as eggs wrapped with paper and put in a regular egg carton; as also, P16 avoids over-packaged items such as chewing gums. P9 does not use dishwasher rinse aid, as she had found a natural alternative to it. As for P14, she brings an objection to the existence of single-use cameras.

It is understood that participants reject SUDPs whenever they are able to utilize alternatives; or merely they refuse using them, as in the example of wet wipes, since wet wipes do not feel clean, or leave a residue as P8 and P15 claim:

P15: I do not allow wet wipes in my home, because they do not seem to clean, they leave an uncomfortable feeling on my hands and they leave a residue. I also find it meaningless to carry such things. If I do not touch water and soap, that does not give me a sense of cleanliness. When you go to a restaurant, they put ten wet wipes in front of you; I do not take any of them.

As a singular case, P10 declares that he does not avoid black plastic bags, and he continues using them as garbage bags. He thinks that there is a black plastic bag myth which he defines as an urban legend: the potential environmental and health risks caused by plastic bags, especially the dark colored ones. The reason of this apprehension is not because of being unaware of the risks, on the contrary, because of information overload on the issue, namely information pollution called recently as ‘infollution’; or he possibly believes that it is a deliberate disinformation. Consequently, possibilities of infollution should be taken into consideration in environmental issues.

6.1.2.3 Could be Rejected / Given up SUDPs

Nine participants point out that there are SUDPs which could be rejected or planned to be rejected in the future, however various conditions force participants to continue using them. One main reason for not yet giving them up is the current insufficiency of alternatives. For example, P4 complains about the lack of refillable containers for liquid detergent and soap. Another reason is that it is possible on some occasions to re-use these items. For instance, P9 indicated that she could easily give up using plastic bags; they have become unavoidable items, since they are re-used at home as garbage bag. Thus, in this case, the motivation of the actual use of plastic bags is dependent on their re-use.

One other explanation is as P8 declares: Even though it would be time consuming, if she pushed herself, she could have given up plastic beverage cups. Similarly, plastic forks and knives, beverage cups, drinking straws can be avoided for P14. Another example P14 gives is for cotton swabs, as an alternative to them, a hairpin and a cotton wrap can serve the same purpose; nevertheless she continues to use cotton swabs. She thinks that they are not indispensable, nevertheless she continues using them. It is inferred that the meaning behind this attitude might be not questioning SUDPs or not resisting to them enough, just keep continuing the existing behavior; since the opposite requires swimming against the tide.

6.1.2.4 Reduced SUDPs

All of the 16 participants try to avoid some kind of SUDPs. The examples of endeavor for decreasing their consumption of SUDPs are as follows. Using plastic bags as less as possible is uttered by six participants. If P3 forgets to bring a cloth bag, she has to get a plastic bag. For P6, it is not possible to completely take plastic bags out of his life, even though he is trying to reduce the use of them. Likewise, P10 uses string bags for the outdoor market, nevertheless some of the types of vegetables and fruits require using plastic bags; so he cannot avoid plastic bags to the full extent.

Six participants state that they try to minimize the use of PET water bottles, for example P1 and P15 do it by using their own water containers; in addition to that, P6 and P16 re-use PET bottles for several times. P3 states that she buys PET bottle when the water in her own bottle finishes. Whereas, P15 complains that recently her re-usable metal bottle started to have a bad odor. When she is thirsty outside, she tries to wait until she arrives home. Nevertheless, sometimes she has to buy PET water bottles.

P15 prefers using less and less food package. P9 gives an example of her endeavor for reducing consumption of packed food: when she is hungry outside, she prefers buying bagels unpackaged instead of food like biscuits, and she does not take the paper offered with bagels. Both P3 and P7 think that in long distant bus travels, using new paper or plastic beverage cups every time is unnecessary and bothersome:

P7: I try to make do with a single cup on long distance bus rides. They insist on taking it, as if it definitely must be thrown away.

Consequently, attempts of avoidance almost never result with satisfactory achievement.

6.1.3 Preferences about Packaging for the case of SUDPs

Since a considerable amount of SUDPs is packages, factors influencing the choice of packages are significant for comprehending the usage patterns of SUDPs.

6.1.3.1 Not Much Affected from Packaging Properties

Six participants utter that their preferences are not affected much by the type of packages when buying. For instance, P13 states that her preference is not determined by brown paper bags or cloth bags in which organic food items are sold. This means that the image of being organic communicated by the aforementioned kinds of packages do not influence her choice, since they also become things to throw away at the end according to her. Furthermore, P7 refers to the issue of ‘over-

packaging' (as mentioned on chewing gums and egg packages, above in Section 6.1.2.2), and states that he is not affected by this issue when making a purchase. P8 thinks she is not really affected; because, she thinks that her own perfume bottle is also quite ugly and somewhat bad; still, she keeps using it. Subsequently, it is seen that the participants who declare not being affected by the packaging properties, imply a kind of awareness on the difference between the outer package or the image of the package, and the actual item inside.

6.1.3.2 Preferred Types of Packaging Properties

There are a range of different approaches on packaging properties. One group of the concerns is the ecological and health concerns. P5 considers different aspects of packaging simultaneously: that it is healthy for them when using, that its ecological footprint is small, and that it is recyclable. P12 prefers paper over plastic, since she presumes that it is recyclable. She claims that she chooses "the best of a bad bunch", and she definitely tries to avoid plastics such as PET.

P11: I try to buy pickles in glass jars; I do not know how healthy it is in plastic. I presume that it is not healthy, because it is a petroleum based product.

As an exemplar of ecological sensitivity, because of their special condition P5 and his family are able to get most of their food items from the farms that they know when buying food. That is why P5 and his family have an advantage according to him. Since, generally these friends from the farms are sensitive about packaging as much as possible; they make their choices with regard to both healthiness and respectfulness to the nature. When buying food from these friends, generally standard packages are not involved. They mostly favor re-usable packages. For example, they send tomatoes in wooden crates, or various foods in glass jars or bottles (as shown an example in Figure 6.1.) Afterwards, P5 tries to send the crates back to the farms.

Another ecological concern is waste reduction related to the packages. For instance, P9 favors concentrate products, for all cleaning materials such as detergent or soap,

in order to lessen the amount of package waste. P13 tries to choose packages which can become smaller, occupying less space by being smashed after use. Furthermore, P6 tries to prefer larger packages as much as possible, instead of small packages; so that he can reduce the amount of waste he produces per item.



Figure 6.1 A Package example from a small farm that is sensitive about packaging. This handmade example consists of a glass jar; the lid is reinforced with paper tape, and wrapped with a paper bag. (Photograph by the author. 27.01.2016 Ankara, Turkey).

P14 also claims that it would be both more economical and would involve less amount of packaging in total, if one buys a pack of toilet paper containing 32 rolls instead of 8. On the contrary, P13's opinion on the subject is the opposite of P6 and P14:

P13: I do not buy 5 litre liquid detergent or those in large packaging; I try to buy the smaller ones. When I buy the smaller ones in time I seem to consume more packaging but I do not like the idea of throwing away that huge thing in the trash; I try not to purchase especially hard plastics like detergent bottles, large plastic bottles, washing machine detergents. I try to buy one litre, or one and a half litres, or smaller packages.

Therefore, it is interesting that, considering that the participants are highly motivated and well-informed on ecological issues; through the perception of different dimensions of the problem, the behaviors originated from ecological sensitivity differ with different perspectives. The result drawn from this challenge is that choosing one type of product over another due to their properties does not always offer a deep-rooted solution to ecological problems. Thus, it evidently requires more effort than just selecting the best of a bad bunch.

Another group of approaches is based on the preferences for visual or material qualities. P12 states that she certainly prefers packages that are appealing, chic, and durable. She regards the package also as a product in its own right. She might further prefer packaging made of durable material, such as a metal box for which re-using is already possible. As for P8, package properties only affect her for food items. She is inclined to prefer the packages which have graphics that somehow seem to be of higher quality; she claims that the reason of this is the so-called obligation of choosing them on the basis of visual qualities, and some of the packages may seem to be of poor quality.

P11 favors packaging that is made of brown paper or craft paper, since they are breathable; she likes and buys products wrapped in brown paper, or in packaging made of cloth; which is contrary to P13 (above in this Section). Whereas, P15 realizes that when she is stuck between two products, the one that is white in color seems ‘cleaner’, so she has a tendency towards those. She nevertheless adds that she is aware of them being white does not make them superior. In this case, the image of cleanliness and the color of the package are seen related: being white means *clean* for a package. It is inferred that the quality of the product inside represented through visual qualities of a food package to some extent for P11 and P15, unlike the situation for P7 and P8 above in this Section.

Among materials, several participants are predisposed to glass packages, examples are as follows. P5 generally tries to prefer glass since he thinks that it is healthier. P4 tries to prefer glass for fruit juice as much as possible instead of Tetra Pak.

Likewise, P3 and P15 prefer glass bottles for milk, as to P9 prefers always glass for jam or preserved food. P13 claims, if there is a glass option, she usually prefers it for any food item. Even though there is a plastic lid included, she chooses glass yogurt containers, since she re-uses them. Similarly, P7 occasionally prefers glass over plastic packages. Indeed he thinks that there is no proper recycling practice neither for glass, they are also thrown away. He buys yogurt in glass containers if he comes across, still thinking that its process of recycling might be easier.

Whereas, P13 uses paper packaging, and she is not disturbed by it been thrown away, since it can be processed in paper machines, to become smaller in size.

P4 explains when AOC brand changed the package of milk, they also change the lid of the glass bottle; it has become plastic. This new plastic lid is indeed better for extending the shelf life. When he buys this kind of AOC brand milk bottle, the lid can be closed a little better, when it is used for two days, it does not spill. It was not indeed a serious problem for him; still, it feels much safer, since it also protects from the odors in the refrigerator. Sek brand does not have that kind of lid, when the Sek brand's lid is opened, by removing the band on the bottom of the lid; only a short lid remains, like a small cap on the top, not a functional lid that covers around the top of the bottle. So, it does not close the bottle properly, namely it does not fit on the top. It is not agreeable according to him. But he still buys them, since it is a returnable kind.

A singular case that P4 utters is that: he willingly buys a wine sold with a wine glass alongside, which are packed together. They have a different type of package –an exclusive box– because of the promotion. He does not think that the package is too much when he buys it, since there is a promotion gift ‘an extra’ given with the item. He thinks the reason is that the promotion gift is something valuable. This indicates that the priorities are subject to change easily, considering marketing maneuvers, even within the group of people who feel more responsible towards sustainability. The problem of creating additional waste alters from being a primary concern in this example.

6.1.3.3 Types of Packaging that are not Preferred and Reasoning

Among the participants who refer to materials, there is a strong dislike of plastics, exemplified below:

P5: We are irritated when we see plastic.

P4: There used to be a drink called Tang, it had a disgusting plastic package, and it was so disgusting that you wouldn't even put detergent in it. I never consumed it. It was like imitation glass, an absurd grey color, like it was dirty. Terrible [...] There is a beer brand called Skol, 1 litre plastic bottle; such a ridiculous thing, nothing like drinkable.

P11 does not buy fruit juice in Tetra Pak containers or lemonade in PET bottles. She asserts that she dislikes those PET bottles. Likewise, P13 declares to be annoyed by big plastic packages, PET bottles, and plastic bags. She is disturbed by these materials since there are chemicals inside. P4, as well, detests Tetra Pak milk containers that are new on the market, on which an image of glass milk bottle is given as shown in Figure 6.2.

P4: I won't buy it again. That picture of a glass bottle on the package is already a great mistake. I think it is very superficial, very ridiculous.

P14 tries to avoid chicken sold in expanded polystyrene dishes, since, for her it is the material that biodegrades the poorest in nature. Nevertheless, occasionally she can neither find unpackaged ones, nor can she trust the ones she finds.

P15 does not buy cleaning products, since she has an endeavor on preparing cleaning products by herself. She mentions that she has found recipes and, she tries to make them at home.



Figure 6.2 The Tetra Pak milk package that has a glass bottle image printed on. (Photographs by the author. 26.08.2011 Ankara, Turkey).

Considering the results of preferred types of packaging properties, paper and glass are favored over plastics, metal, and composite materials such as Tetra Pak.

6.1.3.4 Preferred Unpackaged or not Pre-packaged

During the interview, after the question of ‘products especially preferred due to the packaging properties or avoided ones’, as a probe, preferences about packaging for dried nuts and dried fruits, and pulses are asked; in order to remind the options of not pre-packaged for aforementioned types of food.

Unpackaged (*açık* means ‘open’ in Turkish) actually denotes putting those food items in a brown paper bag, or in a plastic bag, after the desired amount is weighed at the selling point; it denotes buying ‘in bulk’. Therefore, it can be better understood as involving less packaging material and not pre-packaged for the end

user. When recalled, many participants assert that they favor unpackaged; for instance, P4 and P7 assert that they choose unpackaged; so does P16, if it is available, since she thinks that non-pre packaged food are more natural, and no synthetics are added. Similarly, P12 is suspicious about additives in packed food, that's why she tries to buy unpackaged as much as possible. P15 does not prefer buying pre-packaged dried nuts and dried fruits, since expiration dates written on the packages do not seem trustworthy to her, in addition to that, the packages seem as dirty inside.

P1 declares that she is against using packaged products generally. She feels responsible for the packages, she cares about them, and therefore, if there is an unpackaged option, she opts for it. She believes that choosing unpackaged food at the beginning is more reasonable rather than spending time after use for collecting and carrying them to recycling box; since it requires extra effort. P1 buys fruits and vegetables from open markets, not from supermarkets; thus, she is able to manage without involving any packages. She also believes that buying unpackaged food is advantageous for things that are sold in bulk. Likewise, P15 is fond of consuming fewer packages; she claims that she is obsessed about avoiding packaged food. That's why, she likes coming back home from outdoor organic market. She feels that it is nice when she puts away food in the refrigerator that she buys from the market; there is nothing left to throw away.

On the contrary, P10 asserts that his main concern is not 'environmental' anymore, He keeps in mind that the theme of this research is on sustainability; thus, he clarifies that his choice of unpackaged food does not mean the endeavor of consuming fewer packages. He explains that he prioritizes freshness and being cost-effective:

P10: I buy unpackaged whenever I can, but it is not because I am sensitive regarding the use of bags, rather I think that they are fresher, or I do it with economical motivation.

P15 buys dried nuts and dried fruits unpackaged most of the time, from dried nuts seller. Thus, she is able to get her own mix prepared. She also buys pulses unpackaged, since packaged ones are large for her, often 1 kilogram. She lives alone, so she needs relatively smaller amounts (around 200-250 grams); therefore she buys from *aktar* (Turkish word for the shop and seller of herbs, pulses, etc.), or occasionally from outdoor organic market.

To sum up, there are three main groups of reasons for opting unpackaged or not pre-packaged food: First group is directly related to sustainability, which is consuming fewer packages or the responsibility of packages after use. The second group is the qualities of food items, namely being fresh, clean, natural, free of additives or synthetics, and being trustworthy. This group is also relevant for sustainability, since the contents, the packaging and surrounding variables are interconnected. In addition to that, many of those qualities are subject to the realm of environmental concerns. The third group is the others, which are flexibility of buying the preferred amount or type, and being economical.

6.1.4 Alternatives of SUDPs

6.1.4.1 Alternative Products for SUDPs and Reasoning

Various alternatives to SUDPs are expressed by participants. The most mentioned one is for plastic bags: instead of plastic bags, six of participants use cloth bags and / or string bags; and P16 uses her own bag. P10 uses cloth bags for dried nuts and fruits and pulses in order to reduce the use of packages. As to replace refrigerator bags, P9 has several Tupperware and other large plastic containers, she stores vegetables in them. She states that they are for refrigerator storage, and prevent bacterial production.

Alternative to stretch film, P15 uses washable plastic caps to cover various containers at kitchen. As for PET water bottles, instead of them, P3 and P12 use their own thermos flasks for water.

P4 strongly emphasizes that he actively searches for *returnable* glass bottles, especially for milk. He is used to buy AOÇ brand returnable glass bottled milk, because he likes the idea of re-using and not throwing out glass packages. Another reason is that the quality of the milk inside, and its being daily (not being UHT treated). Then, AOÇ has produced a new kind of bottle, a non-returnable version, which looks similar to the previous one. He bought this non-returnable version a couple of times. He started searching for a place where he can find the returnable type. As he heard from the author of this thesis, there are places where still returnable bottles were sold at that time; then he found in his neighborhood in one of the small markets, there were still AOÇ returnable bottles. He continued buying them. When he talked to the seller, he said it was going to stop, and later, they stopped selling them. He is disturbed from the idea that he cannot reach the type of bottle he prefers. Then, in his neighborhood, he saw Sek brand's returnable milk bottle for daily type, he had used them around for one month. Even though AOÇ goat's milk has a non-returnable package, he occasionally buys it; since Sek brand is only cow's milk. Then, the small market that he does his shopping, there are no Sek returnable bottles anymore; which annoys him. Sek brand starts selling Tetra Pak package, not even glass. For Sek brand's Tetra Pak box, at the beginning, he has not even realized that it is 500 ml. At least, compared to İçim brand, it seems healthier and appropriate for him. Then, he searches for website of Sek; it is written that returnable glass bottles are still sold, but not in his neighborhood anymore. Lastly, he predicts that the use of returnable glass packaging would tend to decrease in general, whereas Tetra Pak would increase; since he anticipates that the firms have difficulties managing returnable type. Likewise, P5 believes that refundable types are declining.

For milk containers, P4 gives an example from his family, who lives in a small county: they buy milk directly from a milkman, re-using 5 liters PET water bottles. Very similarly, when P5 goes to village, he buys milk from a milk producer. For this purpose, he also re-uses the 5 liters PET water bottles consumed by his mother in large amounts.

Instead of wet wipes, P1 prefers to wash her hands with soap and water. P1 sometimes carries cloth napkin with her instead of using wet wipes and paper napkins. Likewise, P5 uses washable cloth to reduce paper towel consumption. P14 sometimes uses cloth towel instead of paper towel; she asserts that when there is no paper towel, she is able to do without them.

P15 exemplifies one advertisement of paper towel, when somewhere gets dirty, elephant sucks up the liquid spill immediately. So you can clean there in two seconds, in a speedy way. Nevertheless, she has cloths, she always washes and uses, in the same way one can wet it and rub, it offers the same cleaning according to her. She asks why we would need to throw it away; same speed, same thing. However, it is shown as if there is a big difference, and people just believe it. In terms of speed or in terms of hygiene, if it is her own cloth that she uses at her home, at her kitchen, it already is cleaned somehow. It also has a certain use time, it has to be dumped at some point, but it lives at least two months, she does not need to consume two or three pieces of paper towel every day.

P15 thinks that hygienic pads are not indispensable. Instead, she starts using reusable menstruation cup which is made of latex. She uses small size hygienic pad only in the first day of her period as a precaution. She was uneasy with hygienic pads before, she claims that they contain dioxin, and they are made of unrecyclable plastics. She adds that the waste of hygienic pads is a huge amount, and when combusted, they emit toxins. Furthermore, she feels uncomfortable physically when using them.

On diapers, P2 recalls an old example, not from her own experience, but her observation from the past:

P2: In a village in Çorum, İskilip. I was really impressed. It is not going to be easy and probably not the most comfortable for the kid, but young baby - about 3 months old- they didn't use nappies, because there was no nappies there, and they used someone's old shirts or skirts or something, and they made it into the shape of nappies, but they put soil, I saw it. Inside the cloth, there was dried soil. On the bed, they laid down the cloth, and put the dry

soil in it, placed the baby on it, and tied the nappy. And then, they opened the napkin, removed the faeces -because it is also manure. Small baby already did not move much inside the bed. It is an old style, but not 100 years ago, it was 1990s.

P2 and P10 use *rechargeable* batteries, or electronic alternatives to single use batteries, whereas P10 prefers refillable lighters. In addition, P7 and P15 get their printer cartridges refilled. P9 mentions refillable cosmetic containers that she once used to buy:

P9: The cosmetics that I used to use had their containers; cream, shampoo, liquid soap, and such can be refilled at Fresh Line (brand name) from a shopping mall. I used to have only one packaging which was constantly used. I only had to buy it once. I quit those products, because I start using oils. I still keep those containers.

In summary, re-usability is emphasized as various alternatives to SUDPs. Re-usability may refer to certain kinds of options for re-use an item (most of the time, a container):

- **re-usable** (for example cloth bags, multiple use containers or cups, etc.)
- **returnable** (for milk bottles, demijohns, etc.)
- **refillable** (for lighters, pens, toners, bus cards, etc.)
- **rechargeable** (for batteries).

6.1.4.2 Lack of Alternative Products or Alternative Usages for SUDPs

Most of the participants complain about the difficulties of finding proper alternatives for SUDPs, and they suggest what kind of products and / or infrastructures are needed in order to replace SUDPs whenever possible. For example, for P3 and P4, if there were fountains outside, there would be no need for water bottles:

P3: If I do not have my bottle with me, and if I run out of water, I have to buy a plastic bottle; because there are no fountains to drink from. If there were, I would drink from those.

Similarly, when P5 needs to drink tea or coffee outside, and if there is no glass cup, he asserts that it is tough to avoid using disposable plastic or paper beverage cups, or plastic plates, etc.

P13 recalls that earlier in Ankara, there were the brand name Şaşal, the times when buying drinking water was not common. Those 5 liters glass demijohns were very nice, but not returnable. Now, she claims that she would buy 5 liters glass bottle, if she could find, or even the large size 19 liters glass water demijohn, which nowadays is the widespread size. Indeed, it would be tough for the one who carries them according to her. Still, this would be much better; since, the taste of water goes bad in existing plastic containers, until it is brought.

P3 cannot find any alternatives for Tetra Pak packages for beverages other than milk. She thinks that glass is healthier, and easier to recycle. While P4 would like to use returnable milk bottles, since they were taken off the market, he has to use non-returnable ones:

P4: As much as I want to buy returnable milk bottles I cannot do anything once the company takes the product off the market. My hands are tied as a consumer.

P7 explains when buying fruits and vegetables at supermarkets in Turkey, shop assistants stick barcodes on individual plastic bags for weighing them. Since the system does not give up this usage of these plastic bags, he also cannot give up. Addition to that, if there would be other options, P7 would not buy the single-use yogurt packages, but no other options; he feels that he is condemned to use them.

Though P3 tries to use less toilet paper and paper napkin, she cannot find any alternatives. She declares that if there were re-usable cloth roll towel system in public toilets as in foreign countries have (as she observed when she was abroad), instead of paper towel, she might use them for drying hands.

Although P16 does not feel good when using hygienic pads, she feels uncomfortable; nevertheless still she uses, since there are no alternatives according to her.

P13 is very disturbed from the outer plastic packages of products such as toilet papers and paper towels. If refill for them comes onto the market, she would prefer them.

P13: If given an alternative I could gladly give up using all of them.

P4 expresses that packages of cleaning materials are gone into the garbage at home, such as detergent and laundry softener bottles. If there would be still a refill system for products like laundry bleach, just like the one that was available earlier in his hometown, he might use them.

P5 uses single-use razor blade for several times, at least five or six times; and he thinks that is a good thing. He claims that he needs to prefer single-use ones, since they are practical. Before single-use ones, he is used to have the ones for multiple use with a changeable head and a metal stem. They were practical, because one throws away only the razor part and keeps the stem. So, this is indeed a better choice for him; but, he does not know where to find this kind of multiple use type anymore.

P2, P14 and P15 mention that there is re-usable card system for city buses in İstanbul, is not available in Ankara. (However, after this interview study, the municipality of Ankara has offered a new magnetic card system called *Ankarakart* for public transportation including bus and metro, which is refillable; along with the option of single-use cards.)

P5 thinks that it is difficult to avoid packages, since there is always a package for everything. Similarly, P1 asserts that cleaning products come with their own package, and they are all in plastics; unfortunately, they do not have any alternatives according to her. While, P14 thinks that in a big city, it might not possible to find anything without a package. For example, she states that she cannot buy butter or

milk without a package. Likewise, For P15, medicine boxes are used, as there are no other alternatives.

P4 asserts that he has to use aerosol room perfume in his toilet at home, because there is a constant bad odor. The effective kind that he is using does not have a refill option.

There are some efforts of searching for alternative products: namely, P5 tries to find a re-usable drinking cup:

P5: I am looking to acquire a metal cup, if possible, to use as my own cup wherever I go. Since metal cups are more versatile, do not break, you can take it wherever you want; you can take it to the country or camping.

P5 states that he has difficulty of thinking and finding alternative products. In order to develop a solution, thinking hard is necessary; for that, time is needed, and for the action also time is needed, according to him. As to his idea for plastic cover used at construction sites, the solution would be producing non-disposable sturdy versions of it. Since, some of them are already quite sturdy; however, they could be stronger.

P15 is searching for multi-use alternatives for hygienic pads. In addition to that, she also investigates about using vinegar as laundry softener.

6.1.4.3 Reasoning for Not Using Alternative Products for SUDPs

There are certain alternative products for SUDPs, of which are participants stop using or tried but they were not satisfied with. They compare and contrast with the single-use counterparts. For instance, P6 stopped using thermos flask for water. Now he uses PET water bottle. The reasons for not using thermos flask anymore are that: it is heavy; and it prevents spontaneity; which means that he always requires planning his next step: before leaving home, he needed to prepare his stuff, according to him.

P11 explains why she uses paper cup at work: she does not like using other people's glasses. When she leaves her own drinking glass at her atelier, she cannot be sure

how hygienic it stays. Even though she continuously cleans her glass, since her work environment is generally covered with dust (because they use plaster and clay), she prefers using paper cups instead. Another concern is that: P16 does not prefer buying food which is sold open like cheese or salami for hygiene reasons.

P6 states that he continues using dental floss, since alternatives such as thread cannot be a substitute for it. Likewise, P1 states that she had tried an alternative to hygienic pads:

P1: [...] a funnel shaped plastic canister (re-usable menstrual cup called the Moon cup). But I have never thought that it is good to use, it is very uncomfortable and feels bad to touch. A person creates an understanding of an object at first by touch and sight, this looks so plastic and so artificial that although it may be non disposable, I did not want to use it for that function.

For P1, tampon seems to be more natural because of its material, since it is made of cotton. Besides, on hygienic pads, P8 also gives the example of her grandmother, who was used to use pieces of cloth and wash then re-use. This method seems like torture according to her. She states that this is not practical at all, too much effort and energy is consumed.

Even though P8 is not content about using ordinary batteries, she continues using:

P8: I am not very happy about using batteries. I wish I did not use them. I never bought rechargeable ones, because they are expensive and you have to buy a separate charger. Also its performance drops with every recharge. That seems a little troublesome to me.

P6 states that he uses paper napkin; he does not carry a cloth napkin with him.

In summary, the alternative products for SUDPs that are not used, and the reasons shown in Table 6.4:

Table 6.4 Alternative products for SUDPs that are not used, and reasons for not using

SUDPs	Alternatives	Reasons for not using the alternatives
PET Bottle	Thermos	not practical and flexible in use, not easy to clean
Paper Beverage Cup	Drinking Glass	hygiene
Packaged Cheese / Salami etc.	Cheese / Salami etc. sold open	hygiene
Dental Floss	Thread	not suitable
Hygienic Pad	Menstrual Cup (the Moon Cup)	uncomfortable, seems artificial
Hygienic Pad	Cloth	not practical
Battery	Rechargeable Battery	expensive, low performance
Paper Napkin	Cloth Napkin	need to carry along with

The reasons for not using alternatives for SUDPs can be grouped as: First, the alternative products that participants have tried but no longer use. Second group is the alternatives that participants evaluated, though do not use.

By examining the examples of which hygiene is the reason for not using the alternatives, it can be derived that hygiene expectations which are created and supported with SUDPs, cannot be met with non disposable products anymore; since the expectations of people have been transformed and increased with the existence of SUDPs.

6.1.5 After Initial Use of SUDPs

Before throwing away a used SUDP, the behaviors of re-using or keeping for potential use are asked to the participants.

6.1.5.1 Re-use of SUDPs

Most of the participants state that they re-use SUDPs. Eleven participants use jars after the first use. For instance, P6 utilizes jars for storage of various things. P9 likewise, counts many ways to re-use them, such as flower vase, pencil holder, and toothbrush holder. Another example is that, P4 has two “Sarelle” brand hazelnut chocolate spread jars at home. Their function is already to be used as drinking glass; they are produced with the re-use intention, so they do not go to the dumpster. Similarly, P8 keeps “Nutella” jars, and puts spices in them. She says that they are nothing special; and thinks that they are even ugly. Nevertheless she collected them, since she and her husband consumed a lot of them earlier, then she created a set of them.

Nine participants assert that they re-use plastic bags. P3 keeps them for a long time, and uses them when shopping. P16 thinks that plastic bags that she collects, which are in various sizes and shapes, are really useful at times; since, one cannot know when and how s/he would need such a thing. For P4, P7, P8, P10 and P14, their function is generally for being used as garbage bags. Likewise, plastic bags become unavoidable for P9 since they are being re-used as garbage bags. P14 indicates that she is not content with becoming compelled to taking plastic bags from the market and using them as garbage bags:

P14: I do not buy garbage bags, but use the supermarket bags as garbage bags instead. But actually that does not put my mind at ease either, although it says on it that it is biodegradable, it is not very convincing. That is also another annoying subject. I do not know what else could be used instead at home. Otherwise, we have to wash the garbage can every time, if we do not want to use garbage bags.

P4 sometimes uses plastic bags instead of stretch film, when he requires covering food to store in the refrigerator. Buying stretch film seems meaningless to him, when he can use something which is supposed to be dumped anyway. He neither spends money on it, nor uses any extra plastic material. In addition, for him, some of the plastic bags are suitable for using in this manner, able to flex around a cup. As for P11, she reutilized plastic bags in “jewellery beyond tradition” course in

department of industrial design; by making strings, and then by knitting with them. P14 sometimes prefers refrigerator bags for packing sandwiches; she re-uses them for a second time, if they are clean enough.

Glass bottles are being re-used by ten participants. P5 often uses them in the refrigerator as water bottles, or he gives them to friends who need them. Likewise P11 uses them in the refrigerator as water bottles, or when making lemonade. P4 uses glass bottles, one reason is that they are natural, and the other is that there is no risk of toxic reaction with the materials placed inside. He does not put oil or water in plastic bottles. He uses the glass juice bottles of the Sunpride brand (Figure 6.3) for storing water or olive oil.



Figure 6.3 The Sunpride glass fruit juice bottle (ETSM Website).

When carrying olive oil from his hometown, first, P4 brings it in 5 liter PET bottles. He only uses plastic bottles for carrying. Then, he pours it into metal containers or glass bottles. He uses the Sunpride bottle as an oil cup. For oil, the wide mouth is a problem. When pouring oil onto salad, oil might go too much. But for water it does not cause a problem. Even though he has two jugs for water at home, he still uses

the Sunpride bottle; since, even though water jug has a lid, odor permeates inside the water in the refrigerator. When closed, no odor reeks in the bottle. It is good in this respect. When P4 has guests at home, he does not use the Sunpride bottle on the dining table:

P4: When there is a crowded dinner at home, we are having fish and raki [alcoholic drink], I do not put the juice bottle on the table, I use a pitcher for putting ice. Sunpride just sits in the corner, not on the table.

Researcher: Is it subjected to class discrimination?

P4: Yes, a little... By the way, I did not remove the label. It does not bother me.

Similarly, P8 asserts that she bought the same bottle (Figure 6.3) with re-use in mind:

P8: Sunpride, with approximately 5 centimetres opening, it is an advantage that the mouth is wide; it is easy to use as a water bottle. I bought it so that I can use the bottle later on.

P15 also bought blue glass bottles of Uludağ soft drink twice; she keeps both, and uses them as water bottles. Likewise, P9 re-uses water bottles for cold water, and she carries 330 milliliters glass bottle with her.

P4 re-used various glass bottles that he collected as educational material: at the university, when he assisted at workshop practice where he teaches 3D computer modeling to students. They assigned an exercise for students to model objects directly from 3 dimensional objects; he brought all the glass bottles from home and gave them to the students. After they were done, he put all of them to recycle.

Six participants mention that they re-use PET water bottles. P7 drinks water from them over and over again. P10 states that the only kind of SUDPs that he re-uses is PET water bottles. P11 continuously re-uses different sizes of PET bottles to store her chemical substances for ceramic glaze. Since the substances are expensive, she does not want to store them in glass, in case the bottles might break.

Six participants re-use paper, generally as scrap paper. P2 keeps paper at home for years. She states that if both sides of the paper are used, she might even use them for origami. Likewise, P4 uses the backsides of A4 papers. He uses his old thesis drafts as notebook, since they are bound; it is easy to use them as notepads. Likewise, P7 always re-uses paper in printer; he keeps them at his office. P8 keeps some newspaper at home, she needs them to use as covering on the floor, when they cut hair. P11 uses newspapers and magazines in paper clay: she mixes pulp with water and tore-down paper, and adds it into ceramics clay, in order to obtain a porous and light structure when kiln-dried.

Six participants re-use paper bags. P5's wife generally keeps packaging papers, paper bags, and brown bags from the bagel seller, etc. Somehow, they become useful according to him. If they are clean, he and his wife are able to use them as gift wrapping. P15 occasionally re-uses the brown bags from the ecological market, the ones that are clean and in good condition.

Three participants declare that they re-use glass yogurt containers. P13 always re-uses glass yogurt containers in the kitchen, since she is able to wash them after use.

P1 and P16 re-use plastic yogurt containers. P1 buys the same broad and shallow type container every time (shown in Figure 6.4); so she is able to store them stacked. Since they are not in different forms, they are easy to store. She does not have too many of them. She puts soil and seeds, and she produces seedlings in them for her garden.

P4 and P14 re-use plastic ice-cream containers: P14 re-uses them when she gives food to stray dogs, or when she stores food at home, and freezes food in the freezer; and when she carries food to somewhere, in order to avoid carrying them back, thinking the host might also use them there.



Figure 6.4 Re-used plastic yogurt containers (Photograph by the author. 19.06.2011 İstanbul, Turkey).

Twelve participants re-use boxes: shoe boxes, cardboard boxes, gift boxes, metal boxes, etc. P15 re-uses shoe boxes to store shoes, both in winter and in summer. For P5 they are also useful, to put away and store shoes. P16 sometimes collects medicine boxes and teabag boxes for children to play with them.

P4 builds modules by mounting plastic containers of Kinder Surprise chocolate (shown in Figure 6.5), in order to heighten up laptop computer from the table surface; he puts modules of four pieces underneath the laptop. When it sits still, it works well; but when he needs to move the laptop, it causes problem: it slides. He believes that he builds a nice structure; when pressed from the top, modules of three pieces are sturdy and stable, but when modules are multiplied, it lost its stability. He also tries a different structure type, without aiming at any function.



Figure 6.5 Re-used plastic containers of Kinder Surprise chocolate (Photograph by the author. 27.08.2011 Ankara, Turkey).

P4 re-uses plastic photography film boxes for storing stuff. For example, he brought sand from the Baltic Sea (as a souvenir) in that box with him. It serves as a very nice container according to him, since its lid is sealed very well. He puts shampoo in it to use after swimming in the pool, in order not to bring a big shampoo bottle and not to buy another separate small size one. Its lid is closed tightly, it never leaks. Similarly, P8 uses Neutrogena eye make-up remover, which has a height around 15 centimeters. She keeps these plastic bottles after use. For example, when going to the gym, she puts shampoo or shower gel in them from the bigger package at home. They are refillable, and suitable for travel size according to her. She removes the tag label before re-use. She likes them, since she thinks that it has a decent generic form, a plain cylinder, uniform and proper. She has collected three bottles at home so far.

P4 and P12 re-use plastic bubble wrap envelopes (padded mailer); P12 re-uses them when she sends something with cargo.

P8 and P16 re-use paper towels or napkins once more. P8 uses paper towels for a second time; such as before she dumps it, she re-uses it to wipe the kitchen counter; in order to make the best of it. Otherwise, it seems like squander to her.

P8 sometimes re-uses baking paper when she bakes something in the oven. When she makes cookies, it would not become that much dirty for her. She cannot spare it, and she uses the same baking paper in the second tray again. Since at times she thinks that it is a pity, it seems like the disposable things are being disposed too soon. Some of them she would like to use over and over.

P11 has to use so much of mask and gloves; she tries to use masks a couple of times as much as possible; however, mask is indeed intended to be used once, so she questions to what extent it can be used. She re-uses plastic gloves by cutting the ankle parts, as rubber bands; in order to use them to hold together plaster moulds in her ceramics atelier.

P14 washes and re-uses thick drinking straws. P14's son used Tetrapak juice boxes and drinking straws to build a model helicopter for his project in primary school.

At P15's home, ten of plastic forks, knives and plates are stocked. She bought them when 25 people came to her house party. She only has four plates at home. In order to use the disposable ones repeatedly, so as to wash and re-use, she particularly bought a little better ones, which were a little bit more expensive but more durable and colorful.

P11 collected wooden stirrers, thinking of making flowerpots; however, she actually re-used them in her ceramics art project.

In short, it can be derived that some of the participants buy SUDPs with re-use in mind at the first place such as plastic yogurt containers and glass juice bottles; for others, re-use is for the sake of not wasting the to-be-dumped SUDPs after use.

6.1.5.2 Keeping SUDPs

Most of the participants keep SUDPs after use, one way or another, various types of them and in different amounts.

Problems of Storage, Accumulation and Maintenance of Kept SUDPs

Some of the participants complain about the difficulties of storing:

P2: There are so many. My room is a large depot of; it means that maybe one day they would be useful. [...] There has to be a good storage system, because I stored such a box, but since I forgot where I put that box, at that point the system fails.

P1 used to try to keep things for future use, but they require maintenance and care. She experienced that there is no use keeping things just in case, that they would perish, or she could forget about their existence. So, according to her there is not much use in accumulating them:

P1: I tried that; I collected stuff hoping to use them someday. But in the long term, I saw that it is not enough to just put these somewhere, you also have to provide maintenance. If you do not, when you try to use them they are in a bad condition or unusable. Or I forget that I have such things. In my experience if these things are to be used they have to be thought about right then and a place and function must be designated. You put the things that are not going to be used at places where they are not readily available.

Even though P3 uses plastic containers for storing things, after a certain time period, they create problems, since they accumulate too much. They become an inconvenience especially in the communal living quarters, since she lives in a dormitory. She generally tries not to throw things away, especially not biodegradable things. But, after things accumulate so much, they finally will be thrown away, which concerns her.

P5 occasionally keeps glass mineral water bottles, for using at ecological architecture workshops, however since his storing area is limited; he has to throw them away if they accumulate too much.

When P12 and her mother try to clean the kitchen cabinet, they find a lot of plastic containers, accumulated too much; around ten of plastic containers with lid. They indeed have no use. When they are durable plastic such as cheese packages, it is hard to throw away, thinking, perhaps they might be useful. If there is not enough room in the cabinets at home, there is no opportunity; they have to throw away, since they are obviously not useful in any way.

Throwing Away SUDPs after Keeping for Potential Re-use

P14 collects quite a lot of jars. At home she does not make that much jam or pickles; they stay as it is. Now, she gradually starts to put them into the recycle box.

P16 tries not to throw away PET water bottles, since dumping them bothers her. Empty bottles mostly stay at home for a certain time. She has a hard time throwing them away. Then, after realizing she has collected too much, she dumps them. It feels to her that they would be or should be useful. However at the end, she throws them away into the regular bin.

Similarly, P12 collected polystyrene foam food containers from the market, in which she buys meat or cheese; if the container is not so dirty and can be cleaned easily. At first, she intended to give them back to the market nearby, thinking that they might re-use them. However, then she thinks that it would not be very meaningful. Finally, she entirely threw them away.

P8: I used to use lubricant eye drops. They are separately packed doses in small plastic tubes. You break its tip and use. I could not throw away those packages after use. I ended up with a big bag of those plastic tubes. I asked myself why I did keep them, and at the end, I just threw them away. This might be a psychological problem. I probably hoped to make something out of them, since I am a designer. There was a large amount of the same kind of material, which could be used, but now, I do not have such an intention.

P10 once collected cardboard tubes inside toilet paper rolls: his home mate thought of making a relief with them to a wall. Then, he thought that these might not suitable for such an art work. When he moved out, they throw away all of them. Similarly, P15 with her friends, collected toilet paper rolls; thinking that toys can be

done with them. They would be used in the science fair for children, organized by *the Science for Children* magazine. However then, the fair was cancelled; they took them to the recycle bin.

Giving SUDPs to Someone Else

P3 generally brings glass jars to her mother. P9 generally orders food like dried legumes and beans or dried nuts and fruits from a farm by mail. They wrap food or put into other packages. If they send them in plastic bags, she brings them to the recycle box or to her mother.

P15 and her friends at the office collect small packages of single-use packed salt and pepper. A couple of times, they sent them in aid packages to the cities in need.

As to P7, he brings newspapers to the Güneşköy Cooperative (ecovillage initiative close to Ankara); they sometimes use them in there.

Keeping Special Examples of SUDPs

P4 has Lami branded pens, and he likes the box (Figure 6.6) so much that he could not throw it away. He keeps it without using directly functional properties. However in the future maybe it might be used functionally according to him. He keeps it since he appreciates visual qualities, form, and its design. He thinks that it is a nice product, the package is not neglected. He could not think of what to put inside though; nothing but pens or pencils.

Another example P4 gives that he used to keep when he was abroad, was that the plastic mineral water bottle of 500 milliliters which is designed by Rose Lovegrove. It has a nice form, very good, interesting bottle according to him. He depicts the bottle as if it is formed by squeezing clay. He states that he urged to keep it, seeing the designer's contribution on an object, even though it is disposable.

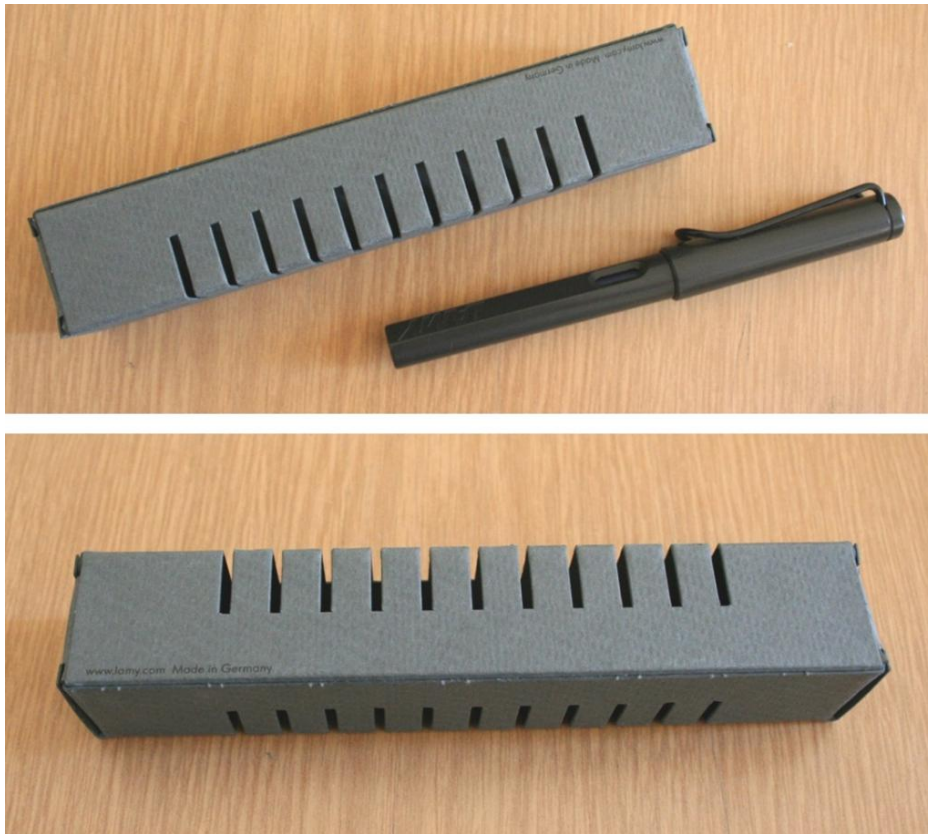


Figure 6.6 Lami branded pen box (Photograph by the author. 27.08.2011 Ankara, Turkey).

Similarly, P5 generally keeps packages if they are original. In addition, P12 sometimes thinks that some of the glass bottles are beautiful, so she does not put them in the recycle bin.

Not Keeping Any SUDPs / Against Keeping

Three of the participants declare that they do not keep any SUDPs.

P6: If I am unable to convert it into something useful instantly, I am against collecting anything. I want to have minimum amount of stuff, that's why, I throw things away.

P11 cohabits with her aunt; and her aunt throws away things immediately if they are not used.

Not Keeping Much SUDP / Keeping a Limited Number of SUDPs

P1 thinks further on what can be done with a certain product, if she can think of no functions, she throws it away. Likewise, P8 is not much of a collector type. In line, P9 does not collect much of packages at home, she declares that she has just a couple of glass bottles, not too many of them, and some gift boxes and wrapping.

Even though P13 re-uses empty jars, shoe boxes, and other types of boxes, they do not just sit empty as a stock; she does not keep them for the sake of keeping.

P10 does not store anything for a long time at home. He used to keep jars, but, when he switched to a more nomadic mode, now he only keeps the amount that he thinks is just enough for what he needs, and throws away the rest.

In P15's office, plastic forks and knives are stored, which were sent with the take-out food orders.

Keeping Many SUDPs

P4 states that under his pull sofa, it is fully loaded with plastic bags. Likewise, P7 does not throw plastic bags away. They have quite a stock. P11 always keeps plastic bags for re-use; unless they are worn out, if they are, she puts them into recycle. However, her husband gets annoyed; he thinks keeping is not necessary.

P4 is used to keep glass bottles for fruit juice but, as they have accumulated, he does not know what to do with them. Later, he thinks he has to buy Tetra Pak again.

P4 keeps plastic ice-cream containers just in case. He finds them useful for example when sending and carrying food along. Lately, his cousin said to him that his mother collects these, so he has to bring them back. For him, it is just a cheap plastic ice-cream package indeed. His mother and his aunt especially have 'a sickness of collecting' them:

P4: Probably, women often keep them, since when they give food to somebody they carry it in those plastic containers easily. No problem if

plastic container comes back or not. For me, the real reason for collecting those plastic containers is that, they could be opted out easily. [...] Nobody uses sefertasi [portable food container] like old times anymore, nobody bothers anymore.

P5 says that their total amount of stuff at home is increasing; so, they must have collecting stuff. For example, he keeps metal caps of glass bottles at home as much as possible; and he tries to generate ideas to utilize them as something else, but not toys, since his children are small. He also asserts that jars are used very often, for transporting natural products from the villages to friends. At P5's home they do not have enough closets to store; that's why for instance, they pile the boxes up. They nest them in each other.

P2 states that she collected too much used paper. P16, likewise states:

P16: I definitely will not throw paper away. I cannot throw it away, because maybe I will find some other use for it. Sometimes I exaggerate, I have such an obsession.

Keeping SUDPs can be experienced to an extent where it is defined by participants as a sickness or obsession.

Keeping SUDPs for Their Potential for Re-use

P4 thinks that a jar might not be a disposable product. He does not throw away any of them. Since, he does not buy empty jars; he does not want to spend money on them. He obtains them when his mother brings or sends food in them from his hometown. He does not continuously buy things in jars. He keeps jars just in case he or his home mate needs to put things inside. In the kitchen, he always has three or four empty jars; he does not want to dump the ones that are already at his hand; since they might be useful. Likewise, P15 collects small glass jars of natural creams that she buys from DBB (Doğal Bilinçli Beslenme): "The Natural Food, Conscious Nutrition" group. She thinks that she might give the empty jars back, and get them refilled. Besides, those small jars can be used at any time, not only for that specific cream according to her.

P15 buys yogurt in glass containers, and keeps the containers. As for P11, she uses and collects plastic beverage cups; nevertheless she asserts that she needs to quit using them.

P5 tries not to throw plastic bags away in order to re-use. P6 keeps paper bags. When it grows too many, they are thrown away altogether. At home there are always paper bags for using when carrying things.

P4 collected quite a lot of plastic containers of Kinder Surprise chocolate. His students also bring some, when they learn that he is collecting.

P12 keeps nice cardboard boxes; one can put things in them according to her. P14 keeps boxes, since she might use. Her home is full of those. Somehow gift boxes would be used when giving presents. Keeping them does not bother her at least.

P4 does not throw away expended polystyrene foams, they might be very useful when moving out, or when carrying glass etc. He collects them under the pull sofa.

P8 has a single-use tooth brush packed with a small amount of tooth paste, given from a public toilet. She kept it just in case she might need it. But the brush seems really rough, so indeed she would not prefer to use it.

P14 does not like using plastic forks, knives, and drinking straws. She does not buy them. If she receives them with the take-out meal, she keeps them and does not throw them away.

P11 keeps gift wrap paper that she receives; she uses them when she gives gifts.

To sum up, the main reasons for keeping SUDPs is that they are appreciated as re-usable, or when they are worth keeping: defined as special, beautiful or well designed. However, collecting used SUDPs is seen as a problem and accumulation is described as a reason for not keeping.

6.2 Properties of SUDPs

When asked what kind of effects SUDPs have in their lives, various aspects are mentioned by the participants, which are grouped as positive and negative properties.

6.2.1 Positive Properties of SUDPs

For P8, there are generally not many negative properties. P9 states that most of them are beneficial, for example band-aids; and outside, closet toilet seat covers for public toilets are absolutely very helpful. As for P15, she ‘feels good’ about certain SUDPs, as an example, using daily hygienic pads makes her feel quite good for now, since without bothering at all, she immediately becomes ‘relieved’ only by going to the toilet and change. P4 thinks that maybe we use them because of the necessities that our lifestyles bring; and so SUDPs begin to have positive contributions.

Alongside the question of effects of SUDPs in general, participants were also requested to assess them in terms of given keywords of speed, mobility, hygiene, comfort, and convenience; many of the participants mention these concepts. For instance, P6 and P8 consider that comfort, convenience, mobility, and speed etc., are all interrelated; and they have the greatest influence on the use of SUDPs. P16 believes that being speedy, mobile, hygienic, comfortable, or convenient is actually SUDPs’ duty.

6.2.1.1 Hygiene

Ten participants mention hygiene or health, though some criticize, while others mention it as a positive attribute. According to P1, SUDPs really add in terms of health. She believes that a minimum food packaging is necessary, for instance for eggs or cheese. When eating outside using drinking straw makes sense to P15, since she thinks that the glass of fruit juice could be dirty.

For P11, disposable gloves and masks help preventing her allergies. One participant uses only condoms for birth control; and does not use other birth control methods. This participant prefers it in order to 'feel safe', at the same time in terms of preventing fluid blend. P9 and P14 state that syringe needles and tattoo needles are very useful for people; most importantly they are hygienic, after use no one is infected.

P8 thinks that products about personal care such as toilet paper and dental floss are more related to hygiene. Similarly, P9 thinks that hygienic pads and diapers are very useful; toilet paper and dental floss are absolutely beneficial in terms of health. Similarly, for P13, in speedy life hygienic pads save much labor; they are beneficial in terms of health and hygiene. The group of products such as toilet paper, paper towel, and hygienic pads, etc., provides great health according to her. Before hygienic pads entered the Turkish market, she was afflicted with this trouble, and then it became very comfortable. For toilet paper issue, previously her mother and grandmother were using cloth for cleansing with bidet nozzle: these small pieces of cloth were washed and re-used afterwards. Instead of coping with cloth, she thinks that these paper products are very necessary. Likewise, P14 asserts that achieving hygiene is very difficult for the cloth alternative to hygienic pads. P10 uses mostly the products like toilet paper and paper napkin, etc., which are related to hygiene, among SUDPs.

For P4, hygiene is a necessity; he adds that hygiene products being disposable is now a requirement. Hygiene is not much related to lifestyle according to him. If he were at a place where life does not flow so speedy, it would be still important, it would still make contribution. Since hygiene is not so related with lifestyle, and it is personal, it always makes positive contributions. He claims that the main contribution of SUDPs is hygiene. He gives an example when eating at a public place; he does not care using SUDPs such as plastic fork and spoon. Depending on where he goes, he might need to choose plastic fork and spoon for hygiene reasons. He continues with another example of things related with personal hygiene, especially related to public use: such as in public toilets, hand drier after washing

hands is not hygienic at all. Drying hands on paper towel and dumping it later seems more hygienic to him. He thinks that it is a more logical choice and necessary. Moreover, if there is no toilet seat cover in a public toilet, he lays toilet paper there. It costs high, however better than getting infected; there might be all kinds of germs. There are no other alternatives, when someone has to use a public toilet according to him. He thinks that in this kind of hygiene situations it is very advantageous. He also argues that hygiene and convenience play role together.

6.2.1.2 Convenience

‘Ease of use’ is included under the ‘convenience’ topic, since the word ‘convenience’ corresponds to ‘things that ease life’ in Turkish. In this regard, eight participants state convenience as an attribute of SUDPs. For example, P3 emphasizes the importance of convenience as nowadays if one tries to use no SUDP, one is required to carry everything with one in her/his bag. She does not think that people would prefer this.

P13 used a lot of paper table cloth at home once; dumping to recycle after use was very convenient for her. Later, when the children grew up, they did not need it anymore, since eating at the dinner table habit was over. She thinks that Royal trademark paper table cloth is awesome; they come in a variety of sizes and decorations.

As for P5, he might choose plastic / paper cups or plates when they go to a picnic: they provide convenience and speed, they are immediately disposed, they have ‘no need for cleaning’, etc. Similarly, P3 asserts that when they go on a picnic, they take plastic plates, forks and knives, in order not to wash; since they offer utility. If they stay long, or there is no water access, or not enough water with them; or at birthday parties, if the group is very crowded, instead of washing, she might prefer using plastic plates, forks and knives. That means convenience; therefore, SUDPs might be used that much for her.

Easy access is significant for P6, and he explains the reason for SUDPs providing convenience as:

P6: It takes away the necessity to plan everything one step ahead; because we can find water anytime we want or find plastic plates and cutlery in an emergency. This is convenient.

Likewise, P6 underlines SUDPs as being ‘effortless’, as they require ‘no obligation’, and no need to clean:

P6: This consumption eliminates the need to wash or clean something. It saves time.

P8 also emphasizes going without maintenance, such as washing and drying:

P8: I can say that maintenance; disposable products help me keep up with speed of life, because they save me from such services.

P11 emphasizes the ‘ease of carrying’: she explains the only positive aspect about PET bottles is their being ‘lighter’ when put in her bag. Generally she carries so much stuff with her that she tries to keep things as light as possible, and so it seems advantageous.

P3 states that nowadays in our lives plastic bags have the greatest benefit: convenience. As for P15, she thinks that toilet paper makes things very easy, with ‘no trouble’.

6.2.1.3 Comfort

Six participants point out comfort: for P8, not needing for service and maintenance, being freed from them might provide comfort and convenience. For example, if there were no refrigerator bags, she would need at least ten empty containers at home, which she would continuously have in the kitchen. She does not have enough space in the kitchen for ten containers, plus cleaning them would be very difficult. Since they continuously eat meat three times a week at home, each time a bag, it means three bags a week, is needed. So, they offer comfort, they alleviate errands for her.

P12 observes her mother, as she could be like her in the future. For instance, washing again and again would be too demanding for an aging person:

P12: This depends on age, on having energy. Comfort becomes more important as you get older. You tend to work less as you get older, because you are tired, and you have less energy; that is why disposable products are preferred. Throwing something away is easier.

P9 feels very comfortable with dental floss: she indicates that she uses Oral-B brand which is made of cotton.

According to P10, food packed for predefined amounts makes it easier to roam in the market. Food packaged for certain amounts are basically related to economy. Various amounts are supplied for food items, if necessary; he is able to buy small amounts. As a shopping habit, in consumption economy, it is related to saving; sometimes it might mean buying things sold in bags. Hygiene is not the primary concern for him; therefore, his choice is not related with hygiene; it is more about comfort and economy.

6.2.1.4 Practicality

Five participants mention practicality: for P5, he needs to use toilet paper due to its practicality. For P14, SUDPs such as toilet paper, hygienic pads, diapers, toothpicks, etc., appear to be indispensable since they add very much to practicality in this life conditions. She also mentions the benefit of sealing for packages.

P13 claims that diapers are unbelievably practical. She knows non-disposable alternatives of diapers from other mothers. They require continuous cleaning, washing, boiling, etc. It takes so much energy, everything costs. She did not try those alternatives. She explains the use experience as:

P13: Baby diapers used to bug me too, throwing away the dirty one without doing anything. I am sure that was a great convenience. Hygienic pads might be coped with when turned to old methods but baby diapers are incredibly easy to use. It may be convenient, but throwing it away always gave me discomfort, but I used it on my two children for nearly two and a

half years. For that time, I tried to take them to the medical waste at our health centre, so it would not mix with other garbage. Because life is already a nightmare; the tempo when you have kids. And you are very sensitive to health and hygiene.

P13 also gives the example of the swimsuit type of diapers for the beach. She thinks that they are very practical and very relieving. When her children were small, there were not any of them available yet. She thinks that recently these products are very improved.

For P10, in certain situations SUDPs are practical, such as buying something at the spot, whenever he needs something instantly, it means practicality for him. He accounts on being able to buy things in different sizes of packages, which brings practicality of use, practicality of buying, practicality of avoiding interruption of everyday life. P12 also explains why sometimes SUDPs might be practical. She gives an example: if she forgets to take water with her, and if she is very thirsty at that moment, when she is able to drink water with plastic cups from the water dispensers with polycarbonate demijohns that exist at banks, doctor's office, hospitals or other offices, she becomes happy. Satisfying a need there is a luxurious incidence for her.

6.2.1.5 Speed

Six participants mention the keywords such as 'pace', 'tempo', and 'time saver' which are evaluated under the 'speed' title. P3 thinks that people generally live very speedy, so the greatest benefit of SUDPs might be saving time. For P5 too, SUDPs seem relatively positive, since, in given certain circumstances, they appear compatible with speed, 'having no time' and 'recklessness'. P4 thinks in a similar way:

P4: If you think about our current lifestyles, we can assume that SUDPs provide all the benefits listed here, speed, mobility, comfort, hygiene, convenience. Since we live at a fast pace in our daily lives.

P13 explains why plastic plates, forks, knives and spoons save her from heavy burden. No need to carry and no worries if they might break:

P13: Plastic forks and knives are awesome when we go to picnics or barbecues, putting everything in a big bag and throwing it away at a place where it can be recycled is splendid. You are saved from washing dishes. It saves time and helps your being comfortable.

P4 states that at some of the movie theaters it is allowed to take food or beverage in. Then, it would not be possible, if disposable packaging is not provided. In this sense, there are benefits like comfort and speed, in terms of accord with the current lifestyle. Although, if he were in a rural area, where he might not need such a thing, there would be no contribution; on the contrary he would prefer the opposite: taking his time with other people for cooking and eating; he would have plenty of time. However, considering the existing life, there is a contribution according to him.

According to P5, since he cannot reach the alternatives, some of the things cannot be changed in the way he wishes in his lifestyle. In the name of speed, SUDPs generally offer advantages; they integrate well with speedy lifestyle. One of the best examples is paper towel: it is prototypical for him. The alternative for paper towel has the processes of washing and drying, it requires time and space at home, special attention; it has certain trouble. However, paper towel has no substantial trouble; it is used quickly and dumped, it provides speed according to him.

As P13 has no time, when having her coffee, she cannot sit at the coffee shop during drinking. When P12 was working at a fulltime job in İstanbul, at 7:30 in the morning she was going out of the house, and at night coming back at 8 p.m. Then, speed became very important. At this situation one might ignore carbon emissions or waste, when they are so exhausted. So, for the people who live in a speedy lifestyle, SUDPs might ease life in terms of mobility according to her.

6.2.1.6 Mobility

Four participants declare that mobility is one of the features offered by SUDPs. P4 gives fast-food example for mobility. He asserts that he seldom eats at Burger King, generally only when he goes to movies. He thinks that there is a contribution to mobility and ease of carrying. In terms of being portable and mobile, taking out might be a positive contribution: if carrying something heavy is a problem, since paper is a very light material, it can be taken along. However, other than this, there is no contribution for him.

At P4's workplace he does not bring his own cup to the canteen. He has mugs in his office; however he only uses them at his office. When he wants to use, he does not refill at the canteen. Only a couple of times he makes his own coffee at his office.

For P5, outside in social life, mobility can become more important. Especially for food and beverage, in some of the situations you cannot take everything with you. In addition, service would not allow this in certain places (such as restaurants).

P8 explains why mobility is important to her: since continuously bringing with her own cup would be a burden for her, and she is constantly on the move, otherwise she is supposed to carry by hand, she does not decide when or where to drink tea. When she would like to drink, she needs to carry along her own cup, which does not appear very practical to her, or continuously she is supposed to carry her bag with her and in her bag she would have to have her cup:

P8: I especially use disposable cups, plates. It is very efficient for mobility; we have to be very mobile. Actually we drink from these cups because we can access them whenever we want. It also depends on the pace of life.

6.2.1.7 Accessibility

Four participants mention SUDPs as easily accessible. For P3, SUDPs are easily accessible, they can be found everywhere; wherever one can access them, if one forgets to take with her/him. She asserts that they can be found everywhere.

Likewise, drinking cups can be found easily wherever P8 goes; no need to think if she takes it with her or not. P4 too supports the idea as:

P4: Since accessibility is easier, just going to the market, giving the money, and getting it.

6.2.1.8 Spontaneity

Two participants mention qualities of SUDPs serving spontaneity. P10 explains it as: when one needs anything outside, no need to carry along with, no need for extra effort for finding another container such as take-out food, continuation of comfort of everyday life, and not taking other responsibilities. P6 also claims that SUDPs require no need to plan ahead, so his idea is comprehended as spontaneity as well.

To sum up, these attributes of hygiene, convenience, comfort, practicality, speed, mobility, accessibility, and spontaneity are counted as positive properties of SUDPs. It is derived that they also imply the reasons for the usage of SUDPs.

6.2.2 Negative Properties of SUDPs

Thirteen participants mention negative properties about SUDPs. As an example, P7 does not see any benefits of SUDPs; no contribution to his life. There are no positive effects to P1's life when she evaluates in total. P9 also thinks that they have negative effects; their continuous consumption is harmful to the nature. Likewise, P15 thinks that SDUPs are already negative to the nature, therefore also negative for herself.

P12 feels pressure of conscience, because of accumulation of plastic food containers at home; they take too much storage space: her mother collects them and cannot throw away. Similarly, P16 feels remorseful about SUDPs:

P16: It creates a guilty conscience if used much.

As for P14, she feels urgency for action that needs to be taken concerning the use of SUDPs:

P14: I try to cut down on disposable products as much as possible but it is easy, unfortunately I am fond of my comfort. However, if it continues like this, there will not be any comfort left. And we better act now.

According to P15, there are too many packages. Likewise, for P2, when it comes to food packaging, a certain minimum is necessary; nevertheless a lot of extra unnecessary stuff is used, and people are becoming dependent to them. SUDPs add many in terms of health; however she criticizes that there are many people who really take it too far. She gives an example for this:

P2: What happened in the past when children were growing up... In my day, there were no wet wipes. Now, all these mothers who are going around with huge bags full of wet wipes, perhaps might need, perhaps might want, perhaps world might crash, and that way the kids end up extremely dependent, and knowing that, s/he wants anything at any moment to be there.

Similarly, P9 does not know what wet wipes are for, she finds them absurd; so do cotton swabs, when all doctors warn definitely not clean your ears with them. She does not think plastic stirrers have much utility, neither do plastic bags. As for P5, single use camera is so meaningless for him.

P5 thinks that printer cartridge must be a serious commercial trickery. Making it refillable must not be too difficult. Since the toner that is put inside is nothing but standard, there might be a few kinds.

P4 believes that too much standardization is aesthetically unsatisfactory when eating or drinking. He is totally against beverage cups of fast-food restaurants. It has nothing to do with hygiene:

P4: We go to the shopping mall as usual. The other day, I had lahmacun, because it is traditional. Even that had turned into fast-food. There was no plate; they just put something plastic underneath. It would be better if they had not. I would prefer eating on paper laid on the tray. They obsessively put these things. I do not think that food take-outs have a positive impact.

P4 thinks that eating is a nice ritual; he would like to show respect. For him, there is a huge difference between fast-food environment and eating at a restaurant with metal fork and knife, and porcelain plate. He sees it as a value; in fast-food, what is

eaten is already low quality, and it gets even lower when they are put in SUDPs. He advocates that at least for coke, they can offer something refillable. When there is a limitless beverage campaign, it would not be difficult for people to bring their own cup and refill them.

P11 is always antipathetic towards plastic bags. One of the reasons why she dislikes them is that they do not live long; they tear off easily, somehow let her down. Likewise, P12 argues on the low quality of SUDPs:

P12: Since single use disposable products are generally manufactured as just ordinary disposable products, they are usually not of good quality, and since they do not give much importance to the food packaging, it may even cause dangerous situations

P12 gives an example for PET bottles, when sale or distribution, they sometimes put PET bottles outside small markets, they are exposed to sun and UV lights, inside plastic bottles, some of the substances are released, and turn into dangerous toxic materials.

P11 has serious concerns about batteries. She is aware of how much water is required for production of batteries. She tries to use rechargeable batteries as much as she can; since she uses a lot of electronic devices in her room: her tooth brush, mouse, and keyboard, etc, all run on batteries. She adds that they do not provide convenience to her life, and they do not ease the life.

6.2.2.1 Being Uncomfortable with / Disturbed from SUDPs

Some participants are troubled about different dimensions of SUDPs. For example, P14 finds creating too much waste disturbing. For P10, buying each time a new thing causes too much accumulation either at home or outside, and causes continuous damage. Each time one buys something, one also pays for package. Each time he uses, he has to throw it away and buy a new one. He does not think they make a contribution, on the contrary, every now and then, SUDPs accumulate at his home; thinking that he would throw them away later. At the end, he throws them

away. They would accumulate somewhere else outside, if not at home. He is not in a positive feeling at all. As for P16, she does not feel right when using single-use disposable products, when she is aware that they are indeed disposable. P2 also thinks that using something which is single-use makes her uncomfortable. P12 finds throwing things away very ridiculous in the name of convenience:

P12: Something that is produced so that I use it only once, all those processes and production for five minutes of usage, convenience never crosses my mind.

Likewise P9 is disturbed by SUDPs:

P9: They are artificial, that is why I do not find them very hygienic or healthy. That is when its convenience bugs me.

P5 is bothered about the usage of SDUPs when alternatives are readily available:

P5: For example if I am served plastic/ paper cups or plates, there are no benefits for me indeed. Since they are professional businesses, indeed they can provide washable products without great difficulty. In this perspective, places where service is offered, things like plastic/ paper cups or plates have not many benefits for anybody other than cost. Thus, they are easier to give up. When it comes to service, the most disturbing thing, when eating out, they bring plastic/ paper cups, this is one of the areas that can be tackled to begin with, as there are not much excuses in this example.

For P1, the reason for the annoyance is mostly related to the materials that SUDPs are made of:

P1: The raw material for most of these products is plastic, and I feel very uncomfortable about the things around me that are made of plastic and increasing the amount of these things. I do not like plastic as a material. Even though it helps me in many ways, since I do not like it, those benefits are meaningless to me.

6.2.2.2 Debatable (Seemingly Positive) Properties of SUDPs

There are many considerations of participants on SUDPs which can be counted as debatable. For P6, SUDPs provide some advantages for people. He believes that they do contribute, but this contribution comes at a cost. P5 argues that “it is easy to

fabricate excuses” to use SUDPs. According to P2, there are a lot of products that are shown as being positive, due to marketing strategies, but there is just a lot of brainwashing.

P12 explains that her understanding of comfort is really different. Comfort is not an important issue for her; she defines herself as ‘not lazy’. She does her chores herself, and she is content with that. She is not so keen on comfort: it is possible to choose PET bottle since it is lighter; but she carries a heavy thermos with her. She does not think of her comfort much, when she feels she is doing something right. When she sees how unreasonable people can be, she cannot defend convenience. She questions how people could overlook the cost of their personal five minutes of convenience. They must not be aware of for sure according to her. It is not easy to ignore when someone knows how much that five minutes of comfort costs, doing everything just for convenience. As for P16, she implies one kind of a conviction to convenience:

P16: Unfortunately, they make life easier.

P5 as well, calls into doubt the concept of comfort:

P5: Comfort is our blind side at every stage; that is being used by industrial design. While we are shopping we gravitate towards the products that have even a small advantage in terms of speed, ease of handling. Yes, comfort or slackness, there is something.

P15 argues that SUDPs should be questioned:

P15: Although they provide convenience, I think they are things that must be thought through again, instead of accepting so readily.

P1 mentions that some SUDPs need to be collected after use for recycle, therefore they require certain effort:

P1: While it takes up my time in certain respects, sometimes it is a time saver. So in total it does not benefit me.

P5 criticizes SUDPs in terms of speed:

P5: I would say it provides speed, but it rather just seems to match the already fast pace of our lives. We have a time problem of unbelievable proportions.

[...] Because we do not have access to any alternatives, we can not change certain things in our lifestyle; thus single use items usually provide advantages in terms of pace.

P5 continues explaining as: since this speedy production at the same time grows together with speedy exploitation; and too much consumption brings too much exploitation of labor according to him.

P10 describes his experience with SUDPs as: paying just a little bit more to get the advantage of a frictionless relationship. He gives the example of polystyrene foam cups which supposedly keep food hot, it is for quite short distance; he questions how much can food inside be chilled in 10 minutes. The situation might change in winter though. Still, it keeps food hot, so everyday comfort continues. He does not require any responsibility that seems positive; the restaurant buys packages and sells them:

P10: In my life, I get rid of the burden; someone else has bought the burden, and sells a product or service to me instead. As a result, one experiences a frictionless relationship; this is the contribution, if we can name it one...

P5 thinks that the problem of packaging that is more of producers than ours; and he argues that this is more than something we could solve, since distribution networks are being convenient; we need to ask producers.

For P5, SUDPs do not seem positive in a broad perspective, since we cannot proceed considering only our own lifestyles; and when we see our own lifestyle is dependent on lives other than ourselves and tied closely, this division becomes somewhat insignificant. He claims that the use of SUDPs, the production stage and later stages, the effects are on the environment, earth, and people; the difference between our lifestyle and life on earth appears not that obvious. That is why it is possible to see the negative aspects. In a similar manner, P15 as well thinks that:

P15: Speed, mobility, hygiene, comfort are sometimes misleading and lately have been forced upon us.

For one of the participants, using condoms feels good for safety, however when using them, it also has a bad feeling.

According to P15, SDUPs make many things easier in our lives: such as, wet wipes come out of bags to remove anything instantly. Nevertheless they do not mean clean for her. Likewise, for P5, he never leans to wet wipes. For instance, everybody might prioritize hygiene, but wet wipes do not have a place in his understanding of hygiene. Nothing would replace cleaning with soap and water. Using chemicals instead, in terms of hygiene, it is more disadvantageous in terms of health. One of the things he uses the least, he does not want to use them much. He does not think they provide anything. Nevertheless he thinks that it is all about habits. When there is no easy access to water, some people might not like their hands to stay in soil or mud for a long time. It seems like an extreme kind of hygiene understanding according to him.

For P4, hygiene issue is interesting: he observes that people might be obsessive with that subject, sometimes come to a degree of sickness. When cleaning at home, he might use a little bit too much detergent for cleaning the floors or dish washing in some situations. However, constantly he asks himself the question if it is really necessary, or is it 'over-hygiene'. He is able to stop himself when necessary: 'hygiene disease' is continuously in his mind.

P5 asserts that he does not like overshoes:

P5: I think an overshoe is the product of a crooked hygiene understanding, I think a natural hygiene is more meaningful. Because when you make a place more hygienic, you provide an environment for certain germs and viruses to reproduce. It becomes too sterile and for me sterile does not mean hygienic.

P12 argues that the subject of hygiene is exaggerated. For her, mothers sometimes might be in a psychopathic situation. The commercials of cleaning products on TV seem like a joke, scoffing: as if we were living in a terrible place, encompassed with bacteria and germs. They use this for making people even more psychopaths:

P12: Sometimes I cannot believe what I hear or see and fear is being spread, especially regarding child health, and I think disposable products are marketed using this. Frankly speaking hygiene is something that can be solved in other manners, and we do not live in a day and age that has that many threats; we are faced with chemicals that are more dangerous than germs. That is hygiene for me: toxic substances. These are all hyped; cleaning products, disposable products and packaging are unnecessarily overvalued by the industry.

Similarly, P7 states that in terms of hygiene, if someone is psychopathic about these issues, SUDPs seem like really indispensable, but not for him.

P9 also does not generally find SUDPs hygienic, since they are mostly plastic or petroleum products. P8 thinks that hygiene is open to discussion, and she adds that:

P8: Being its first user and using it only once is not always a sign of hygiene. All in all, it is made in a factory.

P11 does not like closet seat covers in public toilets, since she thinks that people use toilets so carelessly, they do not think of other people coming after them. Additionally, plastic material does not seem so healthy to her. There must be germs all around, as well. With or without it, she does not think it would be clean. That is why, they do not appear fine.

Consequently, it is noted that participants refer to the so-called positive contributions of SUDPs, questioning them as fabricated excuses; they are concerned by damaging nature and creating too much waste in the name of comfort, convenience or hygiene.

CHAPTER 7

STAGE 3: SURVEY IN JAPAN

Related to the use of SUDPs, Survey I and Survey II were conducted first with 160 participants, and second with six people in Japan. The research design and the conduct of these surveys are explained in detail Section 4.4. Questions of Survey I in Japan are shown in Appendix H in Japanese, and Appendix I in English.

7.1 Survey Findings in Japan

Findings of the study in Japan are analyzed and grouped as follows:

7.1.1 Checking Participants for Environmental Commitment and Behavior

As explained in Section 5.1 for the survey in Turkey, participants' inclination and sensitivity for environmental issues pertain to the survey in Japan as well, presented in Table 7.2, Table 7.3, and Table 7.4.

7.1.1.1 News and Publications in Japan

Question 3 of the survey asked whether or not participants follow the news or publications related to eco-lifestyle, environment, ecology, nature, or sustainability. 60% of the participants indicated that they follow news or publications, 18% of them stated that they sometimes follow, and 22% of them declared that they do not follow any. So, the percentage of the participants who follow news-publications either occasionally or regularly is 78%. Most of the participants indicated in a

general sense, newspapers, magazines, internet, documentaries, books, films, and TV as their sources. Specific examples are shown in Table 7.1.

Table 7.1 Sources of News and Publications in Japan

Question 3	number of people
Nikkei Newspaper	3
Asahi Newspaper	2
NHK TV Channel	2
National Geographic Magazine	1
Greenpeace Japan http://www.greenpeace.org/japan/ja/	1
Slowfood Japan http://www.slowfoodjapan.net/	1
GNH Institute of Gross National Happiness http://www.gnh-study.com/	1
Groundwork Fukuoka http://gwfukuoka.org/	1
Yes Garden http://www.facebook.com/yesgarden	1
Sotokoto Magazine http://www.sotokoto.net/jp/	1
Greenz People http://greenz.jp/	1
Kidukai http://www.kidukai.com/	1
Japan Ministry of Economy Trade and Industry website http://www.meti.go.jp/english/	1
Japan Ministry of Environment website https://www.env.go.jp/en/	1
Design for the Other 90% http://www.designother90.org/	1
Nikkenren, Japan Federation of Construction Contractors, Architecture http://www.nikkenren.com/kenchiku/sustainable.html	1
"Be-Pal" Nature and Outdoor Magazine http://www.bepal.net/magazine	1

7.1.1.2 Associations, Institutions, Foundations, Movements, Collectives, Societies, Networks, Groups or Organizations in Japan

Question 4 of the survey asked whether the participants are members of (or follow) organizations, groups or associations related to eco-lifestyle, environment, ecology, nature, or sustainability. 30% of the participants are found to be members of (or follow) organizations etc.; and 70% of the participants is neither a member nor follower of these. Particular examples indicated by the participants are shown in Table 7.2.

Table 7.2 Associations, Institutions, Foundations, Movements, Collectives, Societies, Networks, Groups or Organizations in Japan.

Question 4	number of people
21st Century Forest Growing (Non-profit Organization)	7
ECO-A: Kyushu University Environment Circle http://kyudaiecoa.web.fc2.com/	1
Sasuteko (Journal of Environmental Information) Student Freepaper Forum http://sff-web.com/sff2015/	1
GNH Institute of Gross National Happiness http://www.gnh-study.com/	1
Make the Heaven (Non-profit organization) http://www.make-the-heaven.com/	1
Hotarusandankai (Non-profit organization to protect fireflies)	1

7.1.1.3 Courses, Trainings, Workshops, Conferences or Trips in Japan

Question 5 of the survey inquired if participants attended a course, training, workshop, conference or participated in a field trip or do volunteer work, related to eco-lifestyle, environment, ecology, nature, or sustainability. It is found that 37% of the participants attended, whereas 63% of the participants did not. The activities indicated are shown in Table 7.3.

Table 7.3 Courses, Trainings, Workshops, and Conferences or Trips Attended or Participated in Japan.

Question 5	number of people
Conference, Seminar, Panel, Symposium, Congress, Forum, Fair	
Conference on Environmental Control	1
Asia-Pacific Conference on Happiness, Tokyo, 5th-6th December 2011	1
Environmental Summit in Asia held in Kitakyushu International Conference Center	1
A seminar at high school culture festival, on recycling waste, compressing waste before throwing to trash	1
Seminar on `used oil transformation to soap`	1
Seminar by municipality of Fukuoka about recycling	1
Eco-innovation and Construction Technology 2012 Trade Fair in Hiroshima	1
Workshops	
On wood biomass utilization	1
Azumio permaculture workshop	1
Courses in University	
School lessons (Engineering)	1
Studying related with this subject	1
Voluntary Work	
Voluntary cleaning work	2
Seaside cleaning activity	2
Forestation activity	2
Moringa tree planting activity at Itoshima city in Fukuoka state	1
Mangrove tree planting activity at Ogimi village in Okinawa state	1
Green Bird: city cleaning works	1
Other Activities	
Jobs related to the environmental protection and recycling based society construction	1

7.1.2 Use Patterns of SUDPs

7.1.2.1 SUDPs that are Used in General

Question 6 of the survey was on which SUDPs are used. In the multiple-choice list given, most of the participants marked PET bottles and plastic bags, both are 84% of the participants. Secondly paper, and thirdly toilet paper are used. The replies of the participants are shown in Table 7.4 by percentages.

Table 7.4 SUDPs are used.

Question 6	%
PET bottle	84
Plastic bag	84
Paper	81
Toilet paper	80
Stretch wrap	78
Garbage bag	78
Plastic food packaging	75
Disposable chopsticks (Waribashi)	75
Battery	70
Napkin / Tissue paper	69
Beverage packaging other than PET bottle (glass bottle, can, Tetra Pak, etc.)	69
Locked bag / Refrigerator bag	67
Plastic containers / Plastic packages other than food (cleaning materials, cosmetics, etc.)	64
Food Packaging other than plastic (glass, metal, paper, etc.)	58
Newspaper	56
Plastic / Paper beverage cup	53
Wet wipe	48
Plastic fork, spoon, knife, stirrer	46
Hygienic pad /tampon	41
Diaper	8
Others	4

7.1.2.2 SUDPs that are Used Most in Amount

Question 7 of the survey was about SUDPs are used most in amount. It is seen that PET bottles and toilet paper are used the most with 58% rate. Then, paper and garbage bags are in the second and third ranks. The replies of the participants are shown in Table 7.5 by percentages.

Table 7.5 SUDPs that are used most in amount.

Question 7	%
PET bottle	58
Toilet paper	58
Paper	53
Garbage bag	49
Plastic bag	44
Stretch wrap	44
Plastic food packaging	41
Napkin / Tissue paper	41
Newspaper	34
Disposable chopsticks (Waribashi)	32
Beverage packaging other than PET bottle (glass bottle, can, Tetra Pak, etc.)	31
Locked bag / Refrigerator bag	30
Battery	29
Hygienic pad / Tampon	24
Plastic Containers / Plastic packages other than food (cleaning materials, cosmetics, etc.)	23
Food packaging other than plastic (glass, metal, paper, etc.)	19
Plastic / Paper beverage cup	14
Wet wipe	12
Plastic fork, spoon, knife, stirrer	10
Diaper	4
Others	3

7.1.2.3 SUDPs that are Re-used

Question **10** of the survey was about whether there are any of SUDPs **re-used**. Firstly, plastic bags are being re-used with 86%, then PET bottles, boxes, and paper respectively. The re-use of beverage packaging at total is 44%. The replies of the participants are shown in Table 7.6.

Table 7.6 SUDPs re-used.

Question 10 Re-use	%
Plastic bag	86
PET bottle	36
Box (present box, cardboard box, etc.)	33
Paper	32
Glass jar other than beverage (jam etc.)	31
Newspaper	27
Plastic fork, spoon, knife, stirrer	19
Food packaging other than plastic (glass, metal, paper, etc.)	18
Plastic containers / Plastic packages other than food (cleaning materials, cosmetics, etc.)	10
Beverage packaging other than PET bottle (glass bottle, can, Tetra Pak, etc.)	8
Disposable chopsticks (Waribashi)	8
Plastic food packaging	6
Others	3
Plastic / Paper beverage cup	2

Asked in Survey II, JP199⁵ replied with examples of PET bottle re-use for fruit juice, and re-use of frozen food package for storing rice. An example of re-use of 330 milliliters PET bottle for green tea prepared at home is also given by JP22 shown in Figure 7.1.

⁵JP1 stands for Japanese Participant number 1.



Figure 7.1 An Example of re-use of PET bottle (Photograph by JP22, 23.12.2014, Fukuoka Japan).

7.1.2.4 SUDPs that are Kept and Cannot be Thrown Away

Whether there are any SUDPs **kept and not thrown away** (even though they are not re-used) was also asked in Question 10. Boxes are the highest number kept among SUDPs. Respectively, plastic bags, PET bottles, and newspaper are also kept. The replies of the participants are shown in Table 7.7 by percentages.

Table 7.7 SUDPs that are kept and not thrown away.

Question 10 Keep and do not throw away	%
Box (present box, cardboard box, etc.)	13
Plastic bag	11
PET bottle	11
Newspaper	11
Glass jar other than beverage (jam etc.)	9
Plastic fork, spoon, knife, stirrer	8
Paper	8
Plastic food packaging	5
Beverage packaging other than PET bottle (glass bottle, can, Tetra Pak, etc.)	5
Food Packaging other than plastic (glass, metal, paper, etc.)	4
Disposable chopsticks (Waribashi)	4
Plastic / Paper beverage cup	2
Plastic containers / Plastic packages other than food (cleaning materials, cosmetics, etc.)	1
Others	0

7.1.2.5 Types of Carriage Bags

Question 11 of the survey was about which of the carriage bags are used when going to any kind of market or shopping. Most of the participants were found to be using plastic bags, secondly cloth bags, thirdly re-useable plastic bags. The replies of the participants are shown in Table 7.8 by percentages.

Table 7.8 Carriage bags that are used.

Question 11	%
Plastic bag	60
Cloth eco-bag	50
Plastic re-usable eco-bag	33
Own bag or backpack / Sports bag	33
Plastic bag re-use repeatedly	18
Paper bag	10
Furoshiki (Japanese traditional wrapping cloth)	3
Handcart / Shopping trolley	1
Others	1

There are incentives for using alternatives for plastic bags, mentioned by JP83⁶:

JP83: Some supermarkets give 2 Yen discount for whom brings their own reusable market bags etc., type of advantage to customers.

7.1.2.6 SUDPs that are Found the Most Important

Question 8 of the survey was about SUDPs that are found **the most important**, and whether there are any of them which seen as inevitable or indispensable. It is found that toilet paper is found the most important with 54%. Then respectively, garbage bags, paper, and PET bottles are indicated. The replies of the participants are shown in Table 7.9 by percentages.

Table 7.9 SUDPs found the most important.

Question 8	%
Toilet paper	54
Garbage bag	38
Paper	37
PET bottle	36
Napkin / Tissue paper	33
Hygienic pad / Tampon	31
Battery	31
Newspaper	26
Stretch wrap	25
Beverage packaging other than PET bottle (glass bottle, can, Tetra Pak, etc.)	19
Plastic bag	18
Locked bag / Refrigerator bag	18
Plastic Food Packaging	16
Food Packaging other than Plastic (glass, metal, paper, etc.)	15
Diaper	15
Plastic Containers / Plastic packages other than food (cleaning materials, cosmetics, etc.)	14
Disposable chopsticks (Waribashi)	13
Plastic fork, spoon, knife, stirrer	8
Plastic / Paper beverage cup	7
Wet wipe	5
Others	1

⁶ The direct quotations from the participants of the survey in Japan are translated by three different professional translators, from Japanese either to English or to Turkish. The parts translated to Turkish are later translated to English by the author.

7.1.2.7 SUDPs that are Found the Most Problematical

Question 9 of the survey was about the SUDPs that are **the most problematical** in terms of ecological considerations. Plastic bags are found to be the most problematical item with 38%. Then, disposable chopsticks (waribashi), plastic forks / spoons / knives / stirrers and plastic food packaging are checked. The replies of the participants are shown in Table 7.10 by percentages.

Table 7.10 SUDPs found the most problematical.

Question 9	%
Plastic bag	38
Disposable chopsticks (Waribashi)	29
Plastic fork, spoon, knife, stirrer	28
Plastic food packaging	28
PET bottle	23
Plastic / Paper beverage cup	17
Plastic containers / Plastic packages other than food (cleaning materials, cosmetics, etc.)	16
Battery	14
Stretch wrap	11
Wet wipe	11
Food packaging other than plastic (glass, metal, paper, etc.)	11
Beverage packaging other than PET bottle (glass bottle, can, Tetra Pak, etc.)	9
Diaper	7
Napkin / Tissue paper	7
Newspaper	6
Paper	6
Locked bag / Refrigerator bag	6
Hygienic pad / tampon	4
Garbage bag	4
Toilet paper	3
Others	2

7.1.2.8 Problems with SUDPs

Question 17 of the survey was about whether there are any problems with SUDPs, in terms of environmental, social, cultural, and economical effects, or of the products themselves. Most of the participants stated that they think that pollution and environmental / natural damage are problems related to these products. Secondly, they indicated the problems of waste or disposal. Thirdly, wasteful / unnecessary / too much consumption is a problem. The replies of the participants are shown in Table 7.11 by percentages.

Table 7.11 Problems with SUDPs.

Question 17	%
Pollution, environmental / natural damage	71
Problems of waste / Disposal	64
Wasteful / unnecessary / too much consumption	63
Exploitation of nature / resources	56
Damage to human (and living things) health	40
Not proper / enough recycling	39
Produced too much / Increase in use / Being widespread	33
Discrepancy between sanitized life and waste treatment	21
The very existence of them / their being single-use	16
Problems of design / functionality / aesthetics	11
Others (please indicate)	6
I do not know / I have no idea.	3
No, there are no problems.	1

Considering ‘wasteful / unnecessary or too much consumption’ is selected by 63% of the participants; related to this choice, excessive consumption, *mottainai* (wastefulness), and excessive packaging are pointed out as significant by several participants in open ended replies.

Excessive Consumption

JP165 utters her thoughts on how difficult it is to change daily behaviors and stop using SUDPs. About economy and production, she continues as follows:

*JP165: It might also be tough for producers to account for **excessive consumption** while the economy is declining -when there is an economic condition in which sales must increase when the consumption drops-, the consumers can no longer cope with an alternative if it is costly. Inexpensive products will be chosen eventually.*

As for JP199, she feels guilty and wishes to change her life, stating as follows:

*JP199: We live in a system that does not let us live without paying for anything or any service. That is why we have to depend on **unnecessary or excessive stuff**.*

Mottainai

In relation to the discussion on excessive consumption, there is a concept in Japan: *mottainai*, which means wasteful or squander. Not being *mottainai* is respected as a value of traditional culture, as JP1 utters:

*JP1: I feel **mottainai** when disposable products cannot be re-used and disposed of as waste.*

Similarly, in relation to speed JP188 implies *mottainai* has been neglected:

*JP188: Speediness is given importance; the spirit of **mottainai** is absent.*

Excessive Packaging

JP174 finds **excessive packaging** as useless. JP197 as well, thinks **over-packaging** for plastic food packaging is a problem. In the same manner:

*JP28: **Extravagant packaging** for food products sold in Japan should not be made.*

JP181 offers bento as one of the solutions to over-packaging:

*JP181: Japan is showing a tendency to **over-packaging**. I think bento can also be useful to stop this.*

Consequently, there are concerns about and criticisms of over-consumption and one of its manifestations is over-packaging. Besides, not being wasteful is considered as an important value of Japanese culture, and it is aimed by responsible consumers.

7.1.2.9 Reasons of SUDPs for Being Widely Used

Question 15 of the survey asked about the opinions on the reasons of SUDPs being widely used. Responses indicated that participants mostly thought that SUDPs are convenient, secondly SUDPs do not require cleaning or washing; thirdly, they are accessible. Fourth reason is finding it to be practical, and the fifth one is the ease of carrying. The thoughts of the participants on reasons of use are shown in Table 7.12 by percentages.

Table 7.12 Reasons of SUDPs being widely used.

Question 15	%
Convenient	84
No need for cleaning / washing	74
Easy to access / Accessible	61
Practical	53
Ease of carrying / No need to carry	51
Laziness / Taking the easy way out	49
Easy to use	46
Consumption habits, hard to change habits / Manipulation of habits	38
Cheap	32
Speedy / hectic lifestyle	32
The image of easiness	25
Irresponsibility / insensitivity (towards environment)	23
Alternatives are disadvantageous / unfavorable	22
Unawareness / unconsciousness (about environmental protection)	21
Production cost seems low	19
No other / or not enough alternatives (not knowing the alternatives)	13
Others (please explain)	3
No, I do not think they are widely used.	1

Habit

Among the reasons for using SUDPs, ‘consumption habits and difficulty of changing habits’ were shown by 38% of the participants. Some of the participants elaborated on this issue in their open ended replies. For example, JP170 states that the use of SUDPs becomes a habit. Likewise, JP168 states that it is difficult to gain a new habit such as carrying re-useable eco-bag:

*JP168: Since childhood I have lived with plenty of disposable products. I need to have a strong will for not to use disposable products and to change my lifestyle. It was hard for me to acquire the **habit** of carrying Eco bag and not receiving grocery bags.*

Awareness

Unawareness or unconsciousness about environment is another reason, mentioned by 21% of the participants. In the open ended remarks, JP16 states that awareness related to the problems is crucial:

JP16: I have few chances to recognize that environmental problems are directly related to my daily life –it is like somebody else’s problem-, even if I understand in theory. That’s the problem.

Costs and Prices

19% of the participants agree that production cost of SUDPs seems low. JP176 mentions that externalized costs (discussed in Section 5.3.2) should be added in prices of SUDPs:

JP176: Raising the costs by internalization of external costs would lead to more expensive disposable products; they might change people’s ideas.

In a similar manner, JP192 thinks that people would pay attention to quality of the products when the prices reflect their burden on the environment:

JP192: I think the only way to curb the mass production and mass consumption is to sell in high prices and then good quality products would be selected.

7.1.2.10 Use of Furoshiki

Question 12 of the survey was about the thoughts of the participants on Furoshiki (Japanese traditional wrapping cloth), and on its usage in daily life. It is found out that 67% of participants never use it. The replies of the participants are shown in Table 7.13 by percentages. Figure 7.2 shows an example of daily use in a university campus, for carrying books and other stuff.

Table 7.13 The Use of Furoshiki.

Question 12	%
I frequently use Furoshiki.	4
I sometimes use Furoshiki.	13
I seldom use Furoshiki.	16
I never use Furoshiki.	67

I use Furoshiki as an alternative for plastic bag.	3
I believe that using Furoshiki would help to protect the environment.	24
Others	9

As for the remarks of the participants who use furoshiki frequently or occasionally: JP61 uses for carrying files at workplace. Five participants define furoshiki as convenient. Two participants find it flexible, since it allows for different usages with the preferred sizes.

For seldom use, JP154 indicates that it is troublesome; two participants mention carrying too much stuff with furoshiki is difficult. Fifteen participants wrote comments on why they never use: some of the participants do not know how to use it. Two participants think that it is inconvenient, JP114 defines it as demanding. Likewise, two participants think that it is hard to use. As for 19 year-old JP86, he thinks that they are old-fashioned. 39 year-old JP 159, she thinks that ‘the appearance is somewhat shameful’.



Figure 7.2An Example of Furoshiki (Japanese traditional wrapping cloth) used in daily life (Photograph by the author. 14.05.2012 Fukuoka, Japan).

For the other comments, JP5 indicates that he never sees people using it when shopping, it might only be used when giving gifts, or as souvenir. Two participants think that it is stylish. Two participants use it when traveling to separate objects or wrap clothes with. Some of the participants think furoshiki is durable or useful; whereas, JP85 and JP197 find them expensive.

7.1.2.11 Use of Waribashi

Question **13** of the survey was on the thoughts about Waribashi (disposable chopsticks), and about their usage in daily life. Almost half of the participants use waribashi sometimes. The replies of the participants are shown in Table 7.14 by percentages. Figure 7.3 shows an example of daily use of My-Hashi in a lunch break used to eat take-out food.

Table 7.14 The Use of Waribashi.

Question 13	%
I frequently use Waribashi.	29
I sometimes use Waribashi.	48
I seldom use Waribashi.	20
I never use Waribashi.	3

I use my own chopstick (My-hashish) as an alternative for Waribashi.	14
I believe that using my own chopstick (My-hashish) would help to protect the environment.	34
Others	10



Figure 7.3 An Example of My-Hashi (re-usable chopsticks) in its plastic case, used in daily life (Photograph by the author. 22.08.2012 Fukuoka, Japan).

The comments for frequent use of Waribashi include the following: they are defined as economic, hygienic, practical, convenient, or easy to use especially for Japanese noodle types which are mentioned as *ramen*, *soba* or *udon*, since chopsticks would not slip. Remarks for the occasional or seldom use include the following: JP27 and JP140 indicate they use it at gatherings such as picnic or parties. Several participants use them outside, or when eating out. Using My-hashhi for JP16, would not significantly contribute to environmental protection, but it is still a part of environmental education according to her.

As for the other remarks for Waribashi and My-hashhi: many participants believe that since Waribashi are made of bamboo most of the time, using them leads to effective utilization of timber from forest thinning; therefore it is beneficial for forest protection. JP1 indicates that she chooses ‘chopsticks made of forest thinning wood or bamboo made in Japan’. Likewise JP28 heard that Waribashi ‘contribute sustainable evaluation of trees’. Another issue is the plastic alternatives of Waribashi; JP29 questions them about how earth-friendly they could be. JP33 defines carrying My-hashhi as troublesome. As for JP34, she is concerned in terms of hygiene since My-hashhi might produce mold in summer when placed into its box immediately after use.

7.1.2.12 Use of Bento

Question 14 of the survey was about the thoughts of the participants on Bento (re-usable lunch box), and on its usage in daily life. 27% of the participants stated that they frequently use Bento, whereas 34% of the participants never use. The replies of the participants are shown in Table 7.15 by percentages. Figure 7.4 shows an example of daily use of Bento, which is prepared for picnic.

JP199 thinks that the world would change to a great extent if everybody prepares their own food. There is an implication in this statement, of carrying food in Bento. JP153 replied Survey II as his example presented in Figure 7.5:

Table 7.15 The Use of Bento.

Question 14	%
I frequently use Bento.	27
I sometimes use Bento.	20
I seldom use Bento.	19
I never use Bento.	34

I use Bento as an alternative for buying single-use plastic packaged bento.	38
I believe that using Bento would help to protect the environment.	38
Others	2



Figure 7.4 An Example of Bento (re-usable lunch box), prepared at home for picnic (Photograph by the author. 14.04.2012 Fukuoka, Japan)

As for the comments for frequent use of Bento, three participants indicate that they prepare and take along Bento in order to save money, one other thinks that it is economical. JP36 uses it due to health reasons.



Figure 7.5 An Example of Bento, My-hashii and Furoshiki use, for lunch at workplace (Photograph by JP153, 10.09.2014, Fukuoka Japan).

For the remarks for never or seldom use, two participants assert that they have no time to prepare, 19 year-old JP71 indicates that there is nobody who is preparing Bento for him.

Other remarks for Bento are: JP63 is hopeful since Bento use is becoming more fashionable. Two participants think that Bento use helps preventing garbage. JP35 states that the kind of Bento box affects the taste of food. On the other hand, JP60 thinks that plastic re-usable Bento boxes do not necessarily help protecting the environment. JP192 questions whether detergent use when washing re-usable Bento box or single use version is worse for the environment.

7.1.2.13 Locations and Situations of Using SUDPs

Outside Use

Parallel to the other artifacts used outside, SUDPs are also increasing according to JP34. She thinks as follows:

*JP34: I think the use of disposable products **outside** is so high. Nowadays, along with the diverse lifestyles, usage of portable goods (mobile phones, computers, etc.) is increased outside. That is why; there is a tendency of*

carrying belongings as less as possible. It is possible to get SUDPs easily outside.

Waribashi is used prevalently in picnics (as mentioned in Section 7.1.2.11), like other picnic-related SUDPs.

Disaster Preparedness

Disasters such as earthquakes are situations that necessitate SUDP use for some of the participants. For example:

JP165: Food wrap and paper plates became necessities at the time of water outage after the earthquake disaster 18 years ago.

According to JP38, her awareness increased about what to consume after the earthquake in Tohoku in 2011. Therefore, it is inferred that temporary crisis situations like post-disaster require SUDPs by the participants.

Japanese society has a high awareness about being prepared for disasters. Disaster preparation includes stockpiling toilet paper, besides items like batteries, drinking water, and food products. There is a social phenomenon of toilet paper hoarding which was seen in 1973 oil crisis, and then after major disasters, resulted in shortages and panic. In response to this, according to Bloomberg News (Adelman and Urabe 2014), the Ministry of Economy, Trade and Industry in Japan organized a campaign to increase consciousness of disaster preparedness, announcing the necessity of advance stockpiling toilet paper for one month as a part of the ministry's 'toilet paper supply continuity plan'. It is also supported by the paper industry in the country.

7.1.2.14 Perceiving SUDPs as Indispensable

JP176 states how reluctant she uses SUDPs:

JP176: I often use disposable products unwillingly, because I am compelled to.

It is understood that rather than an eager choice, there is a sense of requirement when using SUDPs.

7.1.3 Properties of SUDPs

Question **16** of the survey was an open-ended question about evaluation of SUDPs in general, in terms of speed, mobility, hygiene, comfort, and convenience in daily life. 63% of the participants replied to this question. JP16 is concerned about her pursuit of these qualities:

JP16: I feel that they are wasteful in daily life; but I am deep in mass production / consumption life seeking hygiene, comfort, and convenience.

7.1.3.1 Hygiene

%18 of the participants (29 people) mentioned hygiene, including two participants who mentioned ‘sanitation’. For example, JP19 emphasizes the supposed cleanliness of a new product, and states that it is difficult to quit using SUDPs according to her:

*JP19: Single-use products are thrown after each use and this means a new **clean** product for usage every time.*

JP32 however, brings criticism to the level of concern for hygiene in his country:

*JP32: Japanese people are keen on **hygiene**; many could be called as extreme.*

Thus, hygiene is both evaluated as positive and negative attributes for the participants in Japan.

7.1.3.2 Convenience

%24 of the participants (38 people) mentioned convenience. ‘Ease of use’ is also evaluated under the same heading. JP162 utters on the contributions necessity of SUDPs:

*JP162: Considering on safety and sanitary aspects, also with **convenience**, I do not think that it is a problem using the single-use disposable products. It seems that a certain amount of disposable products are necessary if we just know our limits.*

JP49 thinks that SUDPs are ‘not demanding’. Likewise:

*JP192: The biggest reason of using disposable products is that their use is ‘**not troublesome**’.*

Another similar approach is as follows:

*JP165: Accurate solutions should be suggested that will **not be a burden** to one’s daily lifestyle. [...] Otherwise people will obviously choose inexpensive and more familiar items.*

It is inferred that JP165 perceives SUDPs as ‘more familiar’, and cheaper than their alternatives. Besides, the alternatives would be a burden for her. As a result, it is understood that convenience is one of the major reasons for justifying the use of SUDPs.

7.1.3.3 Comfort

Five participants mentioned comfort. JP19 mentions changing diapers as an example for comfort. JP52 feels more comfortable because of the hygienic contributions of SUDPs. As for JP38, she explains her discomfort as: she has to bear with the ecological results of ‘comfortably’ consuming SUDPs. She implies paying a price for comfort. Therefore, it is found that just like the hygiene concept, there are both affirmative and critical views.

7.1.3.4 Speed

Three participants mentioned speed. JP5 thinks speed is vital, alongside other properties. While, JP192 questions it:

JP192: They create a speedy lifestyle. Where do we go in such a rush?

Similarly, JP141 criticizes the common attitude, by contrasting it with the virtue of not wasting:

JP141: People give importance to speediness; whereas the spirit of 'Mottainai' is absent.

As a result, opinions for speed are two-sided as well.

7.1.3.5 Mobility

Portability is evaluated under the term mobility. Two participants mentioned portability and mobility. JP1 thinks that SUDPs are needed due to their portability. SUDPs are important for JP5 because of their mobility besides other aspects.

7.2 Summary Results of Survey Findings in Japan

According to the results of the survey, the most used SUDPs are **PET bottles** and **toilet paper**. PET bottle use is very common in Japan, widely sold in vending machines, both for cold and hot beverages. They are re-used by 36% of the participants. It is found that toilet paper is regarded as the most important SUDP. (For the importance of toilet paper, see Disaster Preparedness in Section 7.1.2.13). **Plastic bags** are the most problematical item with 38% rate. They are being re-used by 86% of the participants as well. 60% of the participants are using plastic bags as a carriage means for shopping.

As for the **problems** that are faced related to SUDPs, 71% of the participants think that pollution and environmental or natural damage are the top problems. Secondly, they indicate the problems of waste or disposal. Thirdly, being wasteful or unnecessary or too much consumption is defined as problems regarding SUDPs by the participants. Excessive consumption and excessive packaging are underlined in the open-ended replies. *Mottainai* -defined as not being wasteful- is expressed as an important value relevant to these problems.

Reasons for widely use are explained by the participants as: firstly SUDPs are convenient, secondly SUDPs do not require cleaning or washing; thirdly, they are accessible. Fourth reason is finding it to be practical, and the fifth one is the ease of carrying. According to the participants, one of the reasons for use is ‘consumption habits and difficulty of changing habits’. For example JP168 states that it is difficult to gain a new habit such as carrying re-useable eco-bag. ‘Being unaware or unconscious about environment’ is shown as another reason for use by the participants. JP16 realizes that it is difficult to perceive direct relationship between environmental problems and her daily life. About the perception of cheapness of SUDPs, according to some participants, people would consume more cautiously if prices of SUDPs include all the direct and indirect costs, by internalizing the externalized costs.

The **use patterns** of SUDPs in Japan include the locations of use and the situations necessitate SUDPs. Some of the participants observed that use of SUDPs outside is significant and prevalent. It is emphasized that disaster awareness is important for some of the participants, as disaster preparation requires certain kinds of SUDPs.

Three examples of traditional Japanese items were chosen to be researched – Furoshiki, My Hashi, and Bento– for being potential alternatives for SUDPs. However, it is found out that the use of Furoshiki (wrapping cloth) is perceived as a special case, and its use is not common. Therefore, Furoshiki does not seem as a prospect for being an alternative to plastic bags. As for Waribashi (disposable chopsticks), widespread use of them is justified with the sustainable and local resources of the bamboo material. As an alternative to Waribashi, the multiple use chopsticks named as My Hashi are being used; and around one third of the participants believe that My Hashi can create a proper option for protecting the environment. As for Bento (re-usable lunch box), 27% of the participants frequently use it. On the other hand, around one third of the participants never use it. Bento use as an alternative to disposable plastic food packages is regarded as a means for environmental protection by more than one third of the participants. Consequently, they neither seem very effective for decreasing the numbers of SUDPs used, nor for

properly replacing SUDPs as alternatives. Nevertheless, as JP16 thinks, they might be instruments to educate people on environmental matters and help increasing awareness.

As for the **properties** of SUDPs, convenience is the most emphasized concept by the participants among the concepts that are reminded in the question for evaluation of SUDPS (which are: speed, mobility, hygiene, comfort, and convenience). Participants also regard mobility as important, whereas there are both praise and criticism for comfort, speed, and hygiene. Their criticism is exemplified with the discomfort of JP38 ‘caused by the results of comfortably consuming SUDPs’. Many participants state that they use SUDPs because of hygiene and cleanliness, however for instance JP32 thinks that some of the Japanese people are too enthusiastic about hygiene.

CHAPTER 8

CONCLUSION

The main aim of this study is to understand the underlying patterns of and challenges for responsible consumers' activities and experiences with SUDPs; by investigating how they relate themselves to these products, and to comprehend the reasons of widespread use of SUDPs. For this purpose, how SUDPs connote the key concepts of contemporary lifestyles within the perspective of material culture discourse is tackled. As the key concepts of contemporary lifestyles: hygiene, comfort, convenience, speed, and mobility are inquired. In order to respond to the aforementioned issues, surveys and semi-structured interviews were conducted with people who are considered to be environmentally conscious from various groups. Two field studies in Turkey and Japan were conducted. First, in Turkey, a survey with 191 people, and interviews with 16 people were executed; and next in Japan, a survey with 160 people, and a second survey with six people were carried out. The reason for doing inquiry in a second country is to find out whether locality is an important factor affecting the use of SUDPs.

8.1 Discussions of the Field Studies

8.1.1 Factors Affecting the Use of SUDPs

Various factors affecting the use of SUDPs have been found throughout the study, which are grouped as intrinsic and external factors. Firstly, **intrinsic** factors affecting the use of SUDPs can be summarized as the features related to physical properties including the materials they are made of (glass, tin, plastics, paper, fabric, etc.), durability, wear resistance, weight, etc.; their function (used as package, as container, etc.) and their usage scenario and context of use: possibility of refill or re-use (such as mineral water bottles etc.).

As for the degree of **re-usability potential** of disposables, the ones related to cleaning and care like toilet paper, paper napkins, and hygienic pads or tampons are especially not suitable for re-use. Most of the participants explained their needs to use them in relation to the concepts of convenience and hygiene. On the other hand, in the continuum of re-usability, paper or plastic dishes without lids, polystyrene foam containers, plastic food containers, wrappers, etc., are somewhere in between re-usable and non re-usable. There is a chance to re-use them, but this requires extra effort, because they are not essentially designed for re-use. In addition to that, when trying to re-use they might cause health or safety risks; so this type of re-use is identified as *abuse* (Pedgley 1995, 13-15). Certain characteristics are required to use an item repeatedly; it being easy to clean, durable, and having an appropriate form. This group of SUDPs includes items that are potentially re-usable; especially those of container type, such as boxes, jars, glass bottles or plastic food containers that have lids.

For the issue of **re-use**: SUDPs are not designed and aimed for use after their initial purpose, thus there is no guarantee that they would serve the secondary function properly or elegantly. In the use experiences, they are spared easily, having in mind that they are already supposed to become *waste*.

Another issue about re-use is, expecting a radical solution from it is not realistic, since it would never be sufficient in any dimension, in terms of neither quantity nor qualities of function or aesthetics. In addition to that, reminding that for instance PET bottles are produced in millions, re-use does not make a major contribution beyond being an instrument of clear conscience for people, by lengthening its lifecycle just a bit longer, before it would go to the dumpster at the end anyway. For recycling too, the issue of becoming an ‘instrument of clear conscience’ is discussed in Karadoğan (2003, 15), in several campaigns in Turkey, blue caps of PET bottles were being collected in order to buy wheel chairs. It is said that 10 thousand caps are equal to 250 kilograms, enough to buy one standard wheel chair. Even though it is thought as helping handicapped people, and as a good cause, it is argued by Karadoğan (2003) as *exculpation of conscience*. In this case, taking the easy way out, people do not consider the essence of the issue –neither about recycle nor the actual needs of handicapped people. Apparently, in Japan too, there are similar campaigns as one participant criticizes:

JP181: I am against collecting efforts of PET bottle covers. I think this is a promotion for the use of PET bottles.

When the material is hazardous or toxic, re-using them -such as using as building blocks- means that another hazardous thing has been reconstructed. Regrettably this attitude helps and serves the continuation of the core problem. The source of the problems originates from the very existence of the problematic products, not about how to get rid of them after use; as in the approach of seeing this as a problem of waste.

Secondly, there are **external factors** that regard the whole processes of the production-consumption phases. These factors might concern infrastructures that SUDPs are used in (such as water supply), or are related to policy making and regulations, or may be associated with factors at the city or municipality scale. External factors are encompassing, overarching, larger, and more crucial than the intrinsic ones. For example, the reduction and disposal of waste created by disposables are not only related to the products themselves, but also to the

infrastructure of collecting and managing waste. An example for this is the use of overshoes in places like hospitals and kindergartens, which is bound to institutional decisions or regulations, rather than being a matter of individual choice.

For the question of whether there is a relation between keeping SUDPs for potential re-use and being a responsible consumer: taking into consideration that the participants of surveys were selected from a population that included responsible consumers, initially it was expected that the rate of participants who keep them would be higher. However, 39% of participants in Turkey reported that they do not keep any of the SUDPs after use. This relatively high percentage indicates that keeping used SUDPs or not, is not related much to being 'responsible'. There are internal and external factors affecting this: One of the internal factors that affects keeping is obviously being 'potentially re-useable', and the other is 'problems of storage and accumulation' (explained in detail in Section 6.1.5). External factors which are influential for throwing away the used SUDPs can be exemplified as, being **exposed** to SUDPs beyond personal preference, and their transformation into waste before even questioning whether they have any chance for any further use. Another one is that individuals do not always have control over the decision whether to keep them. Moreover, considering the number of SUDPs produced and used, the number kept for prospective re-use could never be sufficient and meaningful to offer a satisfactory solution for the problems created by them, such as resource depletion and waste.

8.1.2 Hygiene, Comfort, Convenience, Speed, and Mobility

It is found that there is a continuing demand for hygiene, comfort, convenience, speed, mobility, etc., (discussed in Section 2.3.1) from SUDPs, in spite of serious concerns regarding SUDPs. Meantime, the keywords practicality, accessibility, and spontaneity are added after the analysis of the field study. They are consistent with other concepts of this study's hypothesis. Practicality is closely connected to convenience and comfort. The perception of accessibility is increased as a result of becoming more available both by numbers and variety; so it cannot be counted as an

advantage of SUDPs by itself (also discussed in Section 8.3.1 under the heading of Challenges and Problems Regarding SUDPs). Spontaneity is defined by the participants as living flexibly, effortlessly, and without planning ahead by the help of SUDPs.

These concepts are stated as reasons of SUDPs' use. SUDPs are said to offer these opportunities or advantages, which correspond to contemporary daily lives. In other words, SUDPs seemingly create benefits in various areas in everyday life; therefore, they serve as persuasion for people to use them.

There is a requirement for deeper questioning of these key concepts, to the point where they are redefined. It is understood that the discrepancy occurs due to already existent definitions and their acceptance, which are appreciated by the current culture of consumption. One participant from Turkey thinks that these concepts are forced upon people and they might become deceptive. This deception can be explained by exemplifying the image of hygiene, as one participant finds this image *crooked* and another defines it as over-hygiene. It is significant that one participant speculates for reasons of SUDPs' use as 'fabricated excuses'. This opinion has the implication that people tend to use SUDPs under the pretext of need for hygiene, comfort, convenience, speed, mobility, etc. In short, these keywords are been utilised to justify the use of SUDPs. Consequently, it is needed to displace justifications for use of SUDPs, in order to offer ways of decreasing their use.

8.1.3 Patterns of Use and Influence of Changing Habits

According to Shove, present perception of how everyday life ought to be is open to criticism and redefinition (2003, 8). In order to redefine, no matter how established daily life habits might appear, they should be discussed. Regarding some sorts of SUDPs as 'indispensable' is an example of how routinised and accepted they have become. The idea of indispensability (of SUDPs) builds upon and depends on daily habits.

Looking into the locations and situations of SUDPs' use, outside use such as picnics, using public toilets or experience of take-out food, it is seen that they influence and shape the indoor use of SUDPs. It means that outside use and use in emergent situations affect domestic or indoor use and mundane use. One participant from Turkey gives an example of the normalization of disposable slippers: he believes that they are only for unusual situations. However, in the future use of disposable slippers might become normalized, and becomes a part of everyday life according to him. Additionally, the increasing use of overshoes in places other than hospitals might be a similar instance. Another example for formation of habits is drinking straw use: one participant's children got used to drinking with them, and then drinking straws appeared to be essential. In the same manner, considering SUDPs as indispensable for purposes concerning cleaning and medical use, contributes to growing and expanding into other areas of life, thus, to the use of other SUDPs. Thus, there is a transfer from the emergent to the mundane, from outside to indoors.

8.2 Comparison of Turkey and Japan

Looking into the two field studies for the comparison of Turkey and Japan in terms of SUDP consumption patterns shows that similarities are more obvious than differences, even though there are significant differences between two countries (see Section 4.4.1).

Comparing Turkey and Japan in terms of use patterns, based on the statements of participants, responsible consumers in both countries perceive many SUDPs as indispensable, primarily toilet paper and beverage packages, specifically PET bottles.

In regard to re-use, in Turkey beverage packaging, plastic bags, and food packaging are the mostly re-used products; whereas, PET bottles, boxes, and paper are the most re-used SUDPs in Japan, shown in Figure 8.1.



Figure 8.1 the most re-used SUDPs in Japan and Turkey.

Kept and not thrown-away used SUDPs are food packaging, beverage packaging, and various packages such as boxes in Turkey; while in Japan boxes, plastic bags, PET bottles, and newspaper are kept.

In terms of the most important SUDPs: these are paper napkins or paper towel, beverage packaging, toilet paper, and hygienic pads or tampons in Turkey; whereas these are toilet paper, garbage bags, paper, and PET bottles in Japan, shown in Figure 8.2.

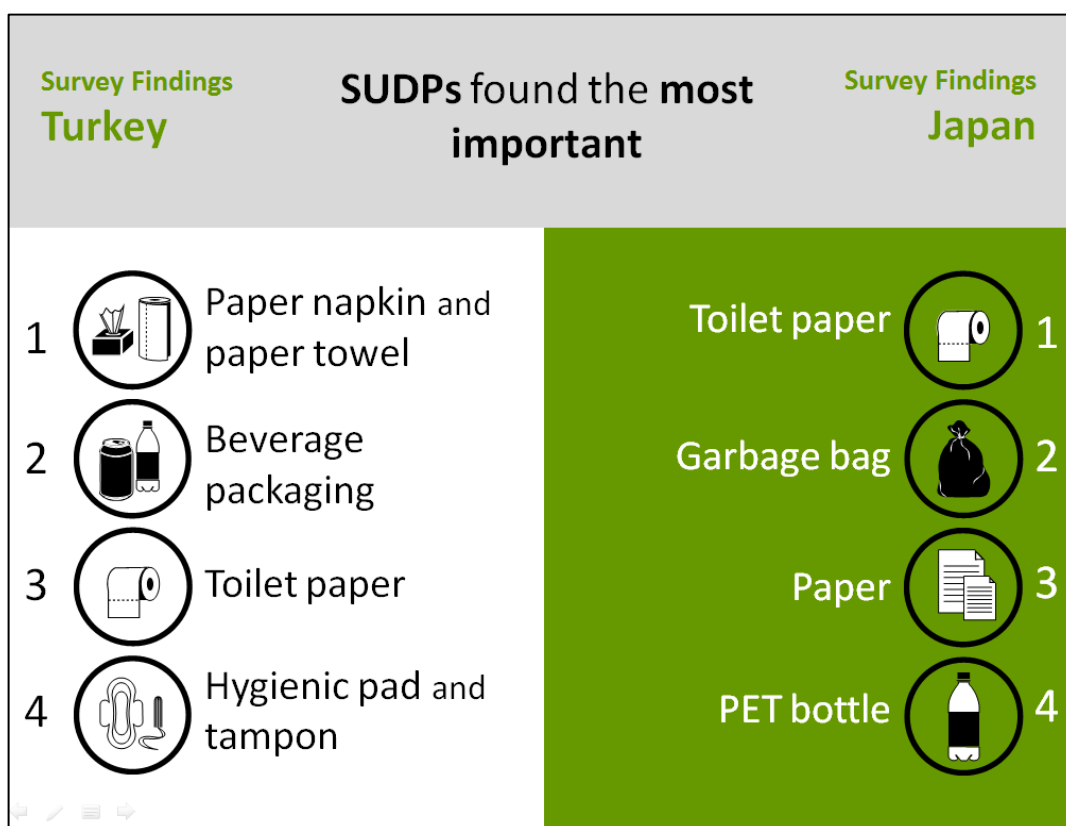


Figure 8.2 the Most important SUDPs in Japan and Turkey.

In regard to the most problematical SUDPs, in Turkey beverage packaging (mostly PET bottles), plastic bags, plastic containers, and plastic packages are found to be most problematical; while in Japan they are plastic bags, disposable chopsticks (waribashi), plastic forks / spoons / knives / stirrers, and plastic food packaging, shown in Figure 8.3.

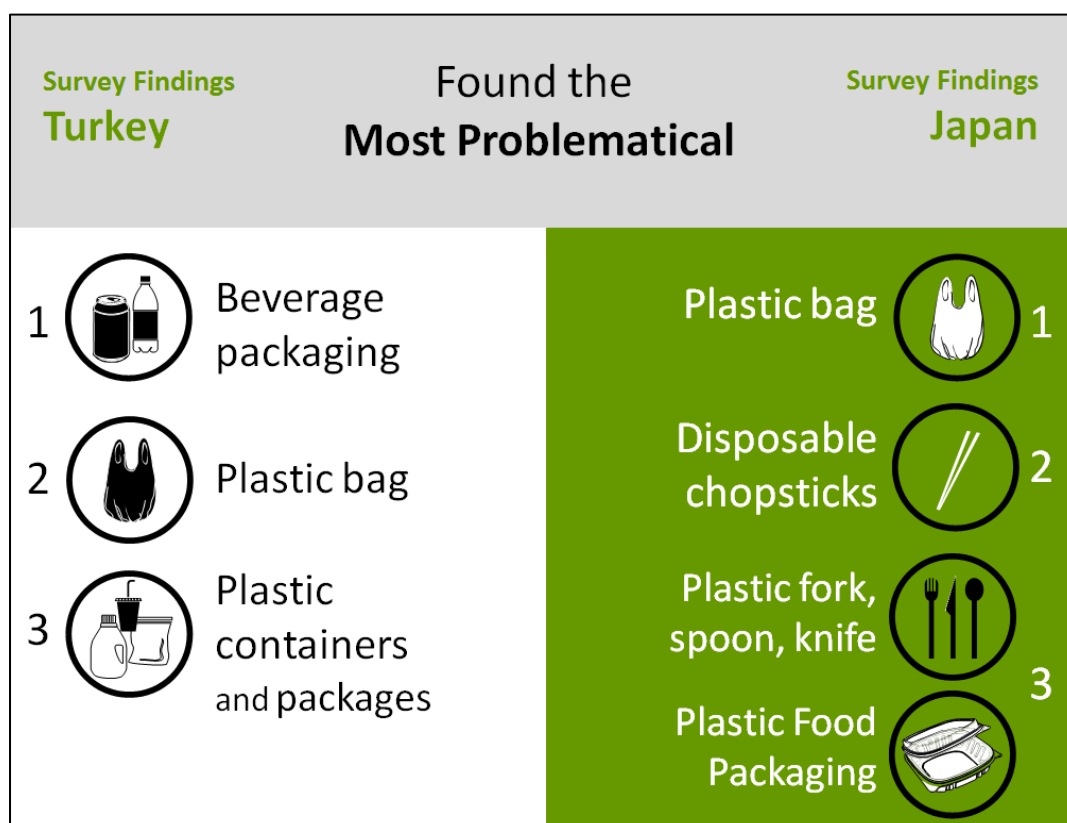


Figure 8.3 the Most problematical SUDPs in Japan and Turkey.

In terms of problems about SUDPs, in Turkey pollution and environmental / natural damage, not being (properly) recycled, and waste or disposal problems are mentioned; whereas, in Japan pollution and environmental / natural damage, the problems of waste or disposal, and wasteful / unnecessary / too much consumption are stated. Participants from both countries concerned about over-packaging.

For the reasons of the widespread use of SUDPs, in Turkey they are cited as being practical, being cheap, people's unawareness or unconsciousness about environmental protection, and being convenient; while in Japan, they are cited as being convenient, not requiring cleaning or washing, and being accessible.

For the situations of SUDPs' use, in both countries, outside use is emphasized. For the properties of SUDPs, given the following concepts speed, mobility, hygiene,

comfort, and convenience, in Turkey the most emphasized concept is hygiene. Participants in Turkey question the so-called positive contributions of SUDPs, call them fabricated excuses; they are concerned by damaging nature and creating too much waste in the name of comfort, convenience or hygiene. Whereas, in Japan, convenience is the most emphasized concept, furthermore participants both praise and criticize comfort, speed, and hygiene; for instance there is the criticism of being excessively enthusiastic about hygiene.

In brief, noteworthy similarities indicate that use patterns of SUDPs, problems and challenges, and reasons of widespread use are more global than specific to locality.

8.3 Research Questions Revisited

Qualitative research does not deliver comprehensive generalizations, but contextual results according to Maykut and Morehouse (2005, 20), which is applicable for this study. For Krippendorff (2004), it is important that the gathered data makes sense in a world which the researcher creates, so as to answer the research questions s/he asks. For this study, the main research question is:

The attitudes, values, patterns of experiences, behaviors, and challenges of responsible consumers towards using SUDPs.

The sub question of the research is:

The reasons for and implications of widespread use of SUDPs in terms of sustainable consumption.

Since challenges and problems related to SUDPs, and reasons for the use of them coincide, both questions are answered together.

8.3.1 Challenges and Problems Regarding SUDPs

Regarding the problems about SUDPs, the first set of problems were explained as arising after they have been used; such as problems of pollution, recycling, waste, unhealthiness, and resource depletion. This group of problems can be considered as the consequences of participants' consumption. The first group is the highest in the percentage in the survey results in Turkey (26% for pollution and environmental or natural damage, 21% for not being properly recycled, and 13% for waste and disposal). As for the second set of the problems, they are related to SUDPs being produced too much and consumed wastefully or unnecessarily. The third group of problems is about some negative attributes of SUDPs, which are their low quality of design, functionality, and aesthetics. Lastly, the fourth group criticizes the very existence of SUDPs, and their being single-use.

Some of the problems referred to by participants in Turkey related to SUDPs (such as recycling not being possible) are dependent on the factors intrinsic to the disposables, such as material, size, quality, and function (such as ease of use). These problems do not require radical changes about SUDPs.

An underlined issue in the field study in Japan is excessive consumption, which is recognized as a burden. One participant believes that 'the mass production and mass consumption' are required to be curbed. One of its symptoms occurs as over packaging. Even though packaging has an obvious merit, and is perceived as a helping quality for care and contributing to hygiene, many participants are aware that it has gone too far.

Some of the participants of the study in Japan uttered their critical approaches towards SUDPs: one is 'the attitude of disposability', as JP181 states her concern about:

JP181: I think by using disposable products, my own life would eventually become like 'disposable'. Changing my lifestyle by using an object with care and for a long time, I give value to myself and to people around me.

From this point of view, it is inferred that this attitude of disposability might diffuse to other areas of daily life beyond disposable products.

The most problematic SUDPs were expressed in Turkey as beverage packaging (mostly PET bottles), plastic bags, food packaging, and plastics / plastic container or plastic package. Results indicate that particularly plastics are found to be problematic. Plastics –as a material used for different product groups– is despised in many comments. For example, among many, one participant stated: “I sense an awkward smell and taste from all of the products made out of plastics. I choose not to use these kinds of products, since they disturb me so much” (The same issue also occurs in Section 6.1.1.3 under the heading: Types of Packaging that are not Preferred and Reasoning).

Apparently beverage packaging -especially **PET bottles**- is recognized as a severe problem according to the survey results in Turkey. Participants see it as a source of a problem; nevertheless it is more of a result of a wide range of external problems, mainly concerning the access to drinking water. For PET bottles, potential of re-use usually goes unfulfilled, because of the accessibility limits of water sources for refill. Indeed, although it classifies as a container with a lid, it does not serve well for refill. As for the intrinsic problems, they are not easy to clean, prone to bacteria reproduction and give out bad odors when used repeatedly.

Plastic bags are considered both important and problematic. Hence, below are inferred:

- Their function is vital and recurrent in daily life.
- Alternatives are insufficient and / or unavailable.

Participants complain about using plastic bags; nevertheless they still continue to use them. This situation indicates that plastic bags are comprehended as if they were an indispensable part in the flow of everyday life. Once they were not indispensable; but now they have become so. This means the external factors which are surrounding plastic bags persuade people that they are indispensable. Most of the

time participants use whatever is offered in the existing context of market or shopping, and they have no prior preparation for carrying the things they buy. For the replacement of the daily usage of plastic bags, even the combination of several alternatives does not seem to be enough to offer satisfactory solutions. For instance, several participants indicated that they have to use plastic bags when they forget to take their cloth bags with them. Thus, it can be considered as an evidence for the use of plastic bags being so deep-seated that, it is challenging to find sufficient substitutes for such an established practice. It is understood that the surrounding variables (in this case, external factors) reinforce the use of plastic bags.

When participants explain their preferences of packaging, it is found that they end up yielding *the best of a bad bunch*. Choosing greener products among what is available, causes both decreasing the visibility of ecological problems and delaying their solutions. Being ‘green consumers’ is not sufficient for solving these problems (as discussed in Section 2.1.5).

Attitudes and behaviors which do not help changing the mind set (for this research, efforts of reducing disposables) become means for a clear conscience and satisfaction. They do not much contribute to the radical change required; and worse, so-called sensitivity is creating an illusion, which disrupts and weakens the actual extensive environmental struggle.

8.3.1.1 Lack or Insufficiency of Alternatives of SUDPs

Lack or insufficiency of alternatives of SUDPs is underlined by most of the participants: the alternatives are not satisfying in terms of variety and accessibility. SUDPs become appearing to be **unrivaled**. Whereas one participant feels that he is condemned to use them, another implies her ‘conviction to convenience’, and another admits that it seems impossible to find anything without a package in a city. Therefore, it is inferred that SUDPs are becoming widespread, overpowered and have overridden the multiple use alternatives; namely, SUDPs are wiping out their alternatives. The actual reasons of becoming widespread lie beneath the change in

values related to everyday life, causing SUDPs to appear as more and more advantageous or indispensable. Consequently, to a degree, deficiency of alternatives is ‘perceived’, and not always actual. As mentioned earlier (in Section 6.1.1.4), higher standards of hygiene for instance, set and fortified by the widespread usage of SUDPs, cannot be reached with non disposable alternatives any longer. Increasingly exposed to SUDPs, peoples’ expectations have been changed. As a result, attempts to stop using SUDPs or endeavors for creating alternatives are defined as *swimming against the tide*.

8.3.1.2 Gap between Practice and Ideology

One of the challenges of responsible consumers is value-behavior conflict and incompatibility; this issue is much discussed in the area of sustainability. Ecological and environmental intentions and sensitivities do not always transform into behaviors. A gap might occur between environmental values and behaviour. It means that environmental awareness and values do not always reflect onto peoples’ behavior (Maniates 2016). For Shove et al. (2012, 143) as a base, theories of behavior change depend on individual choice, whereas theories of practice depend on social and shared conventions. For Shove (2003), the transition of belief into action is overwhelmed and confused by various factors. External factors (explained in Section 8.1.1) can be shown as examples of these factors. In this study, it is inferred that there is a mismatch of circumstances and responsible consumers’ expectations related to environmental issues. This gap is also a reason for SUDP use.

Responsible consumers justify their consumption, explaining through the indispensability of use, plastic bags for example. One of the reasons why they suspend their responsibility might be the understanding of sustainability as utopia, which results in postponing their ideal behaviors to an unknown distant future. One example for this is that, one participant says that city life necessitates SUDPs, and she needs to live in the rural in order to actualize an ideal sustainable life. It means

while waiting for the perfect conditions, sustainable behaviors are delayed and deferred.

The issue of values and the discussion of consequences of actions bring the subject of ethics, which studies and questions proper behavior. Relevant for ecological and environmental ethics, under the heading of normative ethics, there are three basic stances categorized by Curry (2011, 39-49) and Hourdequin (2015): deontological, consequential, and virtuous ethics. The first one is deontological ethics (Kantian ethics), which is characterized by universal personal duties; it is basically anthropocentric, and solely based on human reason. The second one is consequential ethics (also described as utilitarianism), which defends that the core of ethics is happiness and well being of creatures that are 'sentient' (Curry 2011, 45), and in contrast to the previous one, it is collective in manner. It deals with the consequences rather than the quality of responsibilities, and it does not imply universality (Palmer 1997, 9). The final one is virtuous ethics, which is based on the philosophy of Aristotle, defined by virtues that people potentially have. This approach implies a final purpose; therefore it is identified as teleological. Hourdequin (2015, 54-55) states that none of these traditional tracks of ethics fully cover ecological concerns, hence it cannot be confined in a single model, and it is required to respond to moral issues in a flexible manner. Still, for this study, it is seen that people are required to face with the consequences of their actions in terms of their use of SUDPs; therefore this position is more compatible with consequential ethics.

When there is an inconsistency between conception in minds of people (in this case, environmental concern) and the action, it is called *cognitive dissonance* in psychology (Festinger 1962). In this thesis, the gap between environmental values and behaviour explained above is an example for cognitive dissonance.

8.3.1.3 Societal rather than Individual

As discussed before for the individual to take responsibility towards the environment, the problems and challenges are related to more societal realm than personal. Even though this study is mainly constructed around products, it is understood that environmentally sensitive consumption is not solely bound to products and individual choice; but more importantly, as Shove asserts (2003, 198) it is inherently connected to social practices and they are directed by norms. Hence, social practices and norms which have influence on SUDP use should be explained. In the argument of armchair activism that Rogers (2010) makes, individual endeavor alone is superficial and in vain when confronting ecological problems (also mentioned in Section 2.1.5).

For Japan, considering that many SUDPs are sold in convenience stores, JP32 criticizes the construction of a uniform society through these stores:

*JP32: The reason of convenience stores increasing and spreading is maybe due to the emergence of a national character which is fond of a **homogeneous society**.*

Some participants in Japan offer solutions, calling for socio-cultural change in their remarks. According to JP60, in order to find solutions to the problems created because of SUDPs, societal change is required:

JP60: If society does not change, the problem with disposables will not be solved.

In a similar manner, JP206 argues that the development of socio-cultural life spoils the environmental plan. Therefore, it is understood that solutions are more about external factors than internal, and more societal than individual.

8.3.1.4 Perception of Indispensability

Surrounded intensely by SUDPs, participants of the field studies define them as unavoidable, and complain about being exposed to them beyond their preference (See Section 6.1.1.2). It is inferred that SUDPs transform into obligation rather than

choice; therefore, they appear as indispensable. Besides, perception of indispensability is constructed by the help of daily habits and perceived lack of alternatives for SUDPs (also see Section 8.1.3).

8.3.1.5 Invisibility

Another challenge for responsible consumers is invisibility. Invisibility in this sense is a metaphorical one; implying that SUDPs are much taken for granted and not that they are unseen. Invisibility is also one of the reasons of the widespread use of SUDPs. There are two kinds of invisibility: the first kind is that these products themselves are concealed within daily life, through over familiarity. SUDPs often escape from conscious action in everyday life because of being normalized. The reasons of normalization are high exposure and availability.

The second kind of invisibility is related to the problems SUDPs cause. When SUDPs are consumed, comparing the two stages: providing a so-called ease of life is short-term, its contributions are visible, direct, and immediate. Whereas, the harms they cause are medium or long term, and usually are invisible (such as pollution of oceans, creating unmanageable wastelands, or health risks), indirect, gradual, and distant. Therefore, adopting the use of SUDPs is rapid, on the other hand, abandoning the use and demanding for alternatives are troublesome and indirect.

The challenge of invisibility is connected with the issues of communication; thus, in this sense it requires better communication design to serve for increased visibility.

8.3.1.6 Distance

One Japanese participant defines a challenge as: the difficulty in realizing the association between everyday life and environmental problems caused by SUDPs. It indicates a distance between daily life routines and the outcomes of these practices. One of the outcomes is waste; and waste is removed from cities to remote (mostly indefinite) places, meaning virtually disappearance, resulting in a physical and

mental gap. Therefore, detachment arises between people and the consequences of their consumption.

8.3.2 Reasons of the Widespread Use of SUDPs

Prevalently, certain attributes of SUDPs were regarded by responsible consumers as the first set of reasons of the widespread use, namely being cheap, accessible, practical, convenient, easy to use, and not requiring cleaning or washing. The second significant set of reasons is related to responsibilities of the users: unawareness about environmental protection, laziness, consumption habits, difficulties in changing these habits, and irresponsibility or insensitivity towards the environment. The first group mentioned above indeed is not comprised of genuine reasons; they are the outcomes of the widespread usage of SUDPs. For the perception of cheapness, misconceptions about the price of SUDPs might take a part, due to *externalized costs*: it means concealed or ignored expenditures which are related to social and ecological outcomes of production, transportation, or disposal stages (Leonard 2010a). Especially for SUDPs produced on a large scale, prices might be misleadingly cheap or they might even be provided free of charge. On accessibility, SUDPs have become widespread, and their accessibility and availability have increased consequently. Although accessibility is stated as an attribute of SUDPs, indeed, this is not one of the reasons, but the consequence of former reasons. Thus, there is confusion as to the cause and effect relationship.

As for the second group of the reasons, they are mostly related to individual responsibility. Believing that ecological responsibility depends solely on personal choices might be a misapprehension. As Maniates (2016) warns, labeling people as unaware or lazy is a reductionist approach, since it evades from (or ignores) the social and political dimensions.

The widespread use of SUDPs has many **implications**. The central one is that, the extensive effects of problems caused by SUDPs indeed influence the whole society, while considerable part of the society seems unaware or indifferent. As Pedgley

asserts (1995, 49), the main peril is the attitude that disposables endorse, which means that ‘throwing-away’ becomes tolerable within society.

Unsustainability is all-pervading into daily life habits and behaviors, they are reflected in sorts of everyday life areas. However, just trying to change them into better and greener ways would not always touch the root causes; as daily life habits and behaviors are symptoms of these roots which are in the ideologies and the structures of society and economy.

8.4 Suggestions for Solutions

The prospects for institutionalizing ecological ethics may be growing as humanity recognizes its radical dependence on the environment. To advance the cause will require work on many fronts. To begin, it will be necessary to replace the sense of self as consumer with a sense of self as green citizen. This implies developing some limits to consumption— fewer disposable items, for example. (Curry 2010, 28)

It is understood that the central matters are the access to drinkable water and the act of drinking, not water bottles themselves which mediate the practice of drinking. Remembering that access to drinkable water is a basic human right, fountains for drinking water in public areas present a robust example for this issue. As Çoban (2013, 247) reminds, in today’s societies clean water access is often possible for the ones who have economical means, mostly via bottled water. So, it can be said that they indirectly contribute to the ecological problems that are caused by bottled water. Drinking fountains have been almost totally lost in cities in Turkey. A major reason for this is the polluted water resources. One of the rare examples is shown from Middle East Technical University campus in Ankara in Figure 8.4. The campus has its own source that is regularly checked for contamination. Another example of a drinking fountain is from an airport in Japan in Figure 8.5.

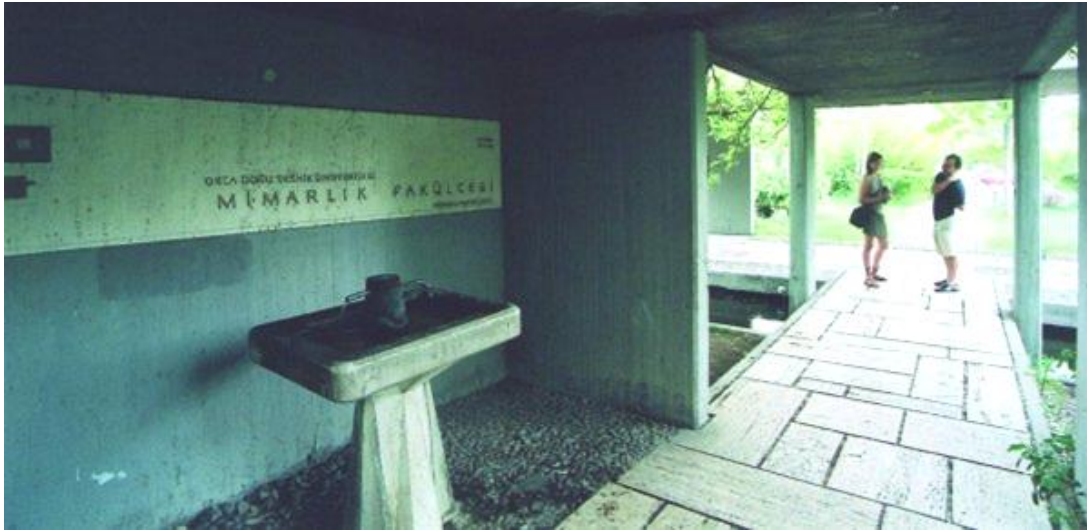


Figure 8.4 An Example for drinking water fountain in Middle East Technical University campus in Ankara, Turkey (Middle East Technical University Website).



Figure 8.5 Public Water Drinking Fountain in International Narita Airport (Photograph by the author. 10.04.2012 Tokyo, Japan).

Thus, drinking fountains should be demanded in public areas, as a systematic solution. In relation to this, service design for sustainability is also an important

solution for products and their use scenarios, as in the example of coffee take-out cups in Germany (see Section 3.5).

Another possible solution area is the systems for deposit; especially for beverage packaging it is beneficial as explained in the field study (the example of returnable glass bottles in Section 6.1.3.2).

Consequently, the focus of solutions should be strategies of encouraging reducing the use of SUDPs, not recycling and reusing them. Furthermore, since the problems are in the city scale, the solutions suggested to correspond to them should be on the same scale.

8.5 Contribution of this Study

With an interdisciplinary approach, this study helps creating a novel understanding and attitude for sustainability and consumption, through researching patterns of SUDP use, and underlying reasons of SUDP use. Therefore, creating grounds for transforming the mindset related to SUDPs, would lead to sustainable future potentials. With a qualitative approach, the methodology of this thesis allows reaching the depth of the related issues and discussing relevant concepts.

Reflections about Increasing the Awareness

Questioning the patterns of use of SUDPs helps increasing the level of awareness. Both in Turkey and Japan many of the participants state that they are surprised when they see the list of the SUDPs in this study, and some of them declare that they start to think deeper on the issue. In the interview study, P10 states that:

When I look at this list I start to think, there are so many disposable items that I did not think of.

In the survey study in Japan, JP16 states that:

I have got used to the mass consumption life and have not thought of or recognized what the problem is. Through this survey, I could look back at my daily life.

Thus, just by asking questions and presenting SUDPs might lead to a sort of consciousness.

8.6 Limitations of the Study

Since the specific subject matter of SUDPs is not found in literature, matching data does not exist. Therefore, findings of this study cannot be compared with a relevant literature.

Another constraint is about the survey participants in Turkey: they are confined to those who have access to the online survey. Therefore, internet access and computer use are technical restraints for the contact with potential participants. For the recruited interview participants as well, their occupation, gender, and level of education create bias for the results of this study, and may act as a barrier for representing the population who are defined as responsible consumers in Turkey.

An additional limitation is that: in the field study, participants are mainly asked about their individual endeavor related to SUDPs. Nevertheless, there also are noteworthy organized initiatives working on the issue, such as nongovernmental organizations, or foundations (See Section 3.5, Section 5.1.2 for Turkey, and Section 7.1.1 for Japan). Their impact might be exceeding personal attempts of questioning, criticizing, reducing, and if necessary preventing SUDPs.

Another dimension for the constraints of this study is the language barrier. For the study in Japan, the data gathered is translated from Japanese into either to English or to Turkish; and then Turkish translations are translated into English by the author. Turkish translation is preferred, since the translator available in the location of the author translates from Japanese to Turkish; as more than the half of the data is paper-based, this paper-based data is handed to the translator in person. However, because of the twofold translation, it was necessary to translate some parts of the

data directly into English again wherever required. For Turkey as well, the data gathered from the field study is translated from Turkish to English.

For the studies of two different countries –Turkey and Japan– a comprehensive field work to allow for an in-depth comparative analysis was not possible due to the language barrier, required work load and time. It also resulted in an imbalance between the field works of two countries in length and detail. Furthermore, comparative analysis would be limited with the data collected for this thesis, the reasons for which were explained previously in the methodology section.

8.7 Recommendations for Further Research

Further research for this subject matter is certainly needed. First of all, in order to make a comparative analysis of the two countries -Turkey and Japan- a more comprehensive field study might be conducted; through overcoming the barriers related to language, work load and time.

To deepen the subject, and to comprehend better, ethnographic participatory research on SUDPs is required. It is not sufficient to look into what participants declare, but it is also essential to observe how they act and what they actually do, for a profound understanding in this area.

To broaden the subject, research on disposable products that are not single-use; and about attitudes and values of the broader society who are not specifically sensitive about environmental issues are necessary, in order to offer effective solutions.

In addition to these, disposable and non-disposable products should be compared deeper, in terms of values of people, period of use, and of course environmental impact. Since most of the participants give special importance to some of the products, such as PET bottles and plastic bags, these products require particular treatment, in terms of offering tangible alternative solutions, not only by offering the usage of alternative products, but also by providing systemic and holistic alternatives.

The kinds of SUDPs which create health risks for humans and other living things are quite under-researched and should be further investigated, as food engineer Şık (2017a, 2017b) states that many plastic based packaging materials contain bisphenol compounds or phthalates, and they cause health hazard by contaminating food products which they carry.

The notions of hygiene, comfort, convenience, speed, mobility, etc. discussed in this study lead to the discussion of myth, where daily material artifacts might present themselves as “mythical significations” in a Barthesian way (Barthes 1972; Kurtgözü 2002, 3). So, these notions should be deciphered and demystified in the sense that Kurtgözü (2002) suggests for design and designed objects; not with a quest of searching for original meaning, but in terms of grasping the ideological and historical connotations that SUDPs carry.

Beyond individual endeavor (as discussed above among the limitations of the study), organized social efforts and potentials for such kind of efforts are found to be meaningful to research. Thus, how influential these organizations are and what can be done in the future should be researched.

This study is confined to two countries -Turkey and Japan-, further studies are needed to be expanded to other countries, in order to make comparisons, to see global tendencies, and to investigate if there are any significant differences and similarities.

Throughout this study, it is recognized that research on patterns of use should focus on practices rather than artifacts. As Shove et al.’s (2012, 15) everyday life theory suggests, activities are inseparable from objects. Therefore, practices of everyday life surrounded by artifacts such as activities of picnic, using public toilet, and ordering take-out food, should be examined in depth, which are relevant for this study’s topic.

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APPENDICES

A. LIST OF ENVIRONMENTAL GROUPS IN TURKEY

	Group	Explanation	Number of Members 01.2013	Location
	DBB, The “Natural Food, Conscious Nutrition” Group (Doğal Besin Bilinçli Beslenme) in Ankara Turkey e-mail Group (Google Groups)	“The “Natural Food, Conscious Nutrition” group (DBB) involves people who are willing to directly (without middlemen) access healthy food produced using nature-friendly methods, and who take responsibility in this respect. It a “participatory guarantee system” model favoring community-supported production.” http://ankaradbb.wordpress.com/about- dbb/ http://groups.google.com/group/dogal- bilincli-beslenme	586	Ankara /Turkey
	Permaculture Turkey e-mail group (Yahoo Groups)	“... is a communication platform for those in Turkey who want to learn, practice and share permaculture in order to build healthy ecological and social relationships.” http://groups.yahoo.com/group/permakult ur-turkiye/?yguid=68826874	603	Turkey
	Buğday Association for Supporting Ecological Living	“... is a non-profit, non-governmental organization. ... the pioneering Buğday ecological movement has been tirelessly working to support, create and promote fair and sustainable production- consumption patterns in Turkey and beyondThe main working areas of Buğday can be summarized as: Organic	3000	Turkey

		Agriculture; Ecological Living; Agro-Biodiversity; Eco-Agro Tourism and Urban Agriculture” http://bugday.org/		
	Slow Food Turkey e-mail group (Yahoo Groups)	“Slow Food is a non-profit, eco-gastronomic member-supported organization that was founded in 1989 to counteract fast food and fast life, the disappearance of local food traditions and people’s dwindling interest in the food they eat, where it comes from, how it tastes and how our food choices affect the rest of the world. To do that, Slow Food brings together pleasure and responsibility, and makes them inseparable. Today, we have over 100,000 members in 132 countries.” http://www.slowfood.com/ http://groups.yahoo.com/group/SlowFoodTurkiye/	191 (yahoo group) Actual number of members: 550	Turkey
	Güneşköy e-mail group (Yahoo Groups)	communication platform for the Ecovillage Initiative close to Ankara. www.guneskoy.org.tr http://health.groups.yahoo.com/group/guneskoy/	366	Ankara /Turkey
	Ecovillage Design Education Turkey e-mail group (Google Groups)	The participants of Ecovillage Design Education workshops at October 2007 and February 2008 at METU campus Ankara, and at June 2009 in Bolu. http://groups.google.com/group/ede-turkey?lnk=	109	Turkey
	GAIA Turkey Sustainable Life for All e-mail group (Google Groups)	“The participants of the “Workshop on Planning for Sustainability” held between 2nd and 5th of February 2009 at METU campus Ankara, which was presented by John Croft.” http://groups.google.com/group/gaia-turkey?lnk=	32	Turkey
	O2 Türkiye Collective (currently undergoing maintenance)	Sustainable Design/ Production/ Consumption “Sürdürülebilir Tasarım/Üretim/Tüketim ile ilgili alanlarda çalışan, düşünen ve üreten profesyonelleri bir araya getirmeyi amaçlayan bir iletişim ağıdır.” http://o2turkiye.ning.com/	76 (in 12.2010)	Turkey
	Greenpeace Turkey		undisclosed	Turkey

B. SURVEY (TURKEY)

Tarih:	No:
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Araştırma Konusu ve Amacı:

Bu anket Orta Doğu Teknik Üniversitesi, Endüstri Ürünleri Tasarımı Bölümü'nde doktora öğrencisi Damla Özer tarafından, doktora çalışmasına veri oluşturmak amacıyla hazırlanmıştır. Çalışmanın amacı, kullan-at ürünlerin yaygın kullanımının nedenlerini araştırmak, ve sorumlu kullanıcıların bu tip ürünlerle nasıl bir ilişki kurduğunu incelemektir.

<p>* İzin ve Gizlilik</p> <p>Burada verdiğim tüm bilgiler –ismim gizli kalmak koşulu ile– sadece bilimsel çalışmalarda kullanılacaktır. Araştırmacı Damla Özer'in buradaki bilgileri doktora tezinde ve bilimsel yayınlarda kullanmasında bir sakınca yoktur.</p> <p><input type="checkbox"/>evet</p> <p>* İsim soyad:</p> <p>Yaş:</p>

Cinsiyet:

☐kadın ☐erkek

<p>4. Sürdürülebilirlik, ekoloji, çevre, doğa, ya da permakültür ile ilgili haberleri ya da yayınları takip ederim.</p>	<p>Hayır <input type="checkbox"/></p> <p>Bazen <input type="checkbox"/> (hangi kaynaklar ve yayınlar, lütfen belirtiniz):</p> <p>Evet <input type="checkbox"/> (hangi kaynaklar ve yayınlar, lütfen belirtiniz):</p>
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5. Sürdürülebilirlik, ekoloji, çevre, doğa, ya da permakültür gruplarına katılıyorum ya da bu konulardaki derneklere üyeyim.	Hayır <input type="checkbox"/> Evet <input type="checkbox"/> (Lütfen belirtiniz):
6. * Sürdürülebilirlik, ekoloji, çevre, doğa, ya da permakültür ile ilgili herhangi bir ders, kurs, çalıştay, konferans ya da geziye katıldım.	Hayır <input type="checkbox"/> Evet <input type="checkbox"/> (Lütfen belirtiniz):

7. Hangi **tek kullanımlık kullan-at** nesneleri kullanıyorsunuz?
8. Genel olarak **tek kullanımlık kullan-at** nesnelerden sayıca en çok hangilerini kullanıyorsunuz?
9. Siz kullanmasanız da, **tek kullanımlık kullan-at** nesnelerde sayıca en çok hangileriyle karşılaşıyorsunuz?
10. Kullandığınız **tek kullanımlık kullan-at** nesnelerin arasından yeniden kullandıklarınız var mı? (Varsa hangileri? ne şekillerde, lütfen açıkla mısınız?)
11. **Tek kullanımlık kullan-at** nesnelerden yeniden kullanmasanız da, çöpe ya da geri-dönüşüm'e **atamadıklarınız**, sakladıklarınız / beklettikleriniz var mı? (Varsa hangileri? Ve nedenlerini açıkla mısınız?)
12. Sizce **tek kullanımlık kullan-at** nesnelerden hangileri en önemlileridir? Sizin hayatınızda önemli yere sahip olanlar var mıdır? Kaçınılmaz ya da vazgeçilemez olarak gördükleriniz var mıdır? (nedenlerini açıkla mısınız?)
13. Sizce genel olarak **tek-kullanımlık kullan-at** ürünlerle ilgili problemler var mı? (Varsa lütfen açıkla mısınız?)
14. Genel olarak **tek-kullanımlık kullan-at** nesnelerden en çok problem olarak gördükleriniz hangileridir? (Nedenlerini açıkla mısınız?)

15. Herhangi bir alışverişinizde ya da pazara gittiğinizde poşet, kese kağıdı, bez çanta, file gibi hangi taşıma araçlarını kullanıyorsunuz? (Nedenlerini açıkla mısınız?)

16. Sizce **tek-kullanımlık kullan-at** ürünler neden çok büyük çapta kullanılıyor? (Lütfen açıkla mısınız?)

LÜTFEN ORGANİK ÜRÜN ÜRETİCİSİ VE / VEYA SATICISIYSAĞIZ, AŞAĞIDAKİ 3 SORUYU (17. 18. ve 19.) CEVAPLAYINIZ:

17. Ürünleri taşıırken, plastik kasa, ahşap kasa, karton / plastik kutu gibi hangi taşıma araçlarını kullanıyorsunuz? Bunlardan özellikle tercih ettikleriniz ya da kaçındıklarınız var mı? (Lütfen nedenlerini açıkla mısınız?)

18. Ürünleri tüketicilere ulaştırırken naylon poşet, kağıt poşet, kese kağıdı, plastik / karton kutu, bez torba gibi hangi taşıma araçlarını sağlıyorsunuz? Bunlardan özellikle tercih ettikleriniz ya da kaçındıklarınız var mı? (Lütfen nedenlerini açıkla mısınız?)

19. Satış yapıyorsanız, satış sırasında plastik eldiven, ıslak mendil, kağıt mendil gibi **tek kullanımlık kullan-at** ürünler kullanıyor musunuz? (Lütfen nedenlerini açıkla mısınız?)

20.a Lütfen aşağıdaki listede, kullandığınız **tek kullanımlık kullan-at** nesneleri **X** ile işaretleyiniz.

20.b En çok kullandığınız **ilk 5** nesnenin yanlarına 1. 2. 3, 4. ve 5. yazarak belirtiniz.

20.c En çok problem olarak gördüğünüz ilk 5 nesnenin yanlarına 1. 2. 3, 4. ve 5. yazarak belirtiniz.

21. Lütfen aşağıda yer alan listedeki tek kullanımlık kullan-at nesneleri kullanma veya kullanmama sebeplerinizi ve / veya **varsa** bunlara alternatif olarak kullandığınız nesneleri yazınız.

		20.a	20.b	20.c	21
		Kullanıyorsanız X işareti koyunuz:	En çok kullandıklarınıza sıra numarası yazınız:	En çok problem olarak gördüklerinize sıra numarası yazınız:	Açıklamalar
GIDA ve İÇECEK	Yiyecek ambalajları				
	İçecek ambalajları				
	Buzdolabı poşeti / kilitli poşet				
	Plastik çatal, bıçak, kaşık, karıştırıcı				
	Plastik / kağıt içecek bardağı				
	Pipet				
	Kürdan				
	Streç film				
	Kağıt kek (mafin) kalıbı				
	Kağıt kahve filtresi				
TAŞIMA	Çöp poşeti				
	Plastik (naylon) poşet				
	Kese kağıdı / kağıt poşet				
BAKIM,	Bebek bezi				
	Hijyenik ped / tampon				
	Islak mendil				
	Tuvalet kağıdı				

	Kağıt mendil / kağıt havlu				
	Kulak çubuğu (pamuğu)				
	Diş ipi				
	Kozmetik ambalajları				
	Temizlik maddeleri ambalajı				
	Galoş				
	Tek kullanımlık terlik				
SAĞLIK	Prezervatif				
	Yara bandı				
	Plastik eldiven				
	Şırınga				
	İğne / dövme iğnesi				
	Diğer tıbbi gereç (maske, test kiti, serum şişesi, ameliyat örtüsü, örnek kabı...)				
DİĞER	Hediye kutusu / kağıdı				
	Parti süsleri				
	Otobüs kartı / bileti				
	Telefon kartı				
	Kullan-at fotoğraf makinesi				
	Kullan-at taşınabilir bellek				
	İnşaatta kullanılan plastik örtü				
	Kağıt / Plastik klozet kapak örtüsü				
	Kağıt (A3, A4...)				
	Pil				
	Dolma kalem kartuşu				
	Yazıcı kartuşu				
	Diğer ambalajlar (ilaç kutusu, boya kutusu, bitki fidesi plastik poşeti, elektronik eşya / hırdavat / kırtasiye / mutfak eşyası kutusu / ambalajı...)				
	DİĞER (Lütfen belirtiniz)				

22. Bu çalışmaya katkıda bulunabileceğini düşündüğünüz kimleri bana tavsiye edebilirsiniz? (Varsa lütfen iletişim bilgilerini yazınız.)

23. Bu çalışmanın devamında 40-50 dakika sürebilecek görüşmeye (mülakata) katılmak ister misiniz?

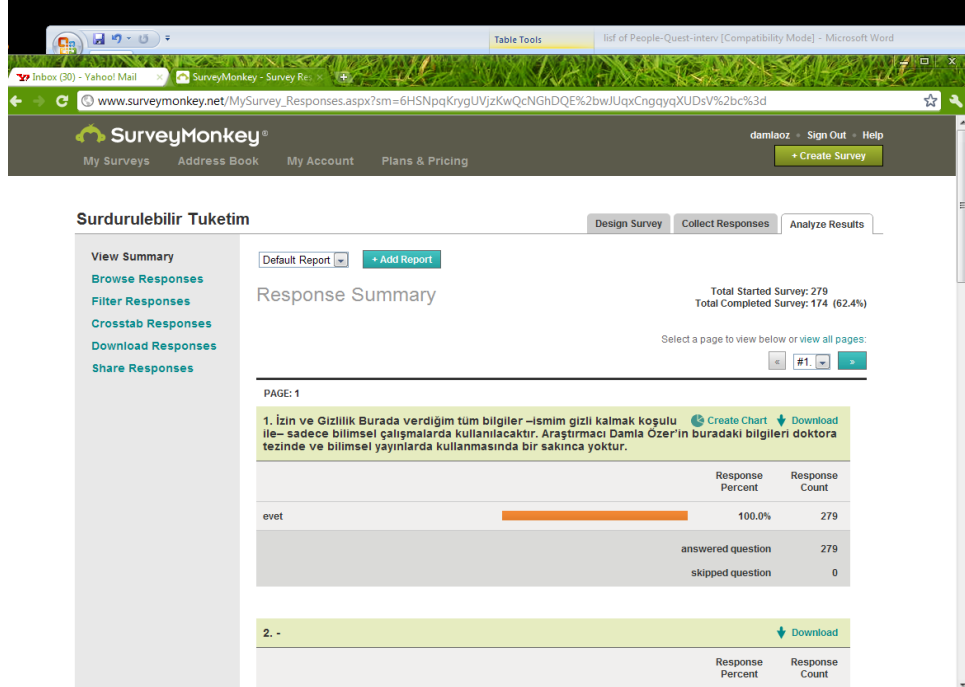
evet (iletişim bilgileriniz) e-posta ve telefon:

Bulunduğu şehir:

24. Sizin bu çalışma ile ilgili eklemek ya da sormak istediğiniz herhangi birşey var mı?

KATKILARINIZ İÇİN ÇOK TEŞEKKÜRLER.

C. ONLINE SURVEY SCREENSHOTS (TURKEY)



Sürdürülebilir Tüketim

Araştırma Konusu ve Amacı:

Bu anket Orta Doğu Teknik Üniversitesi, Endüstri Ürünleri Tasarımı Bölümü'nde doktora öğrencisi Damla Özer tarafından, doktora çalışmasına veri oluşturmak amacıyla hazırlanmıştır. Çalışmanın amacı, kullan-at ürünlerin yaygın kullanımının nedenlerini araştırmak, ve sorumluluğuyarı insanların bu tip ürünlerle nasıl bir ilişki kurduğunu incelemektir.

***1. İzin ve Gizlilik**
Burada verdiğim tüm bilgiler –isim gizli kalmak koşulu ile– sadece bilimsel çalışmalarda kullanılacaktır. Araştırmacı Damla Özer'in buradaki bilgileri doktora tezinde ve bilimsel yayınlarda kullanmasında bir sakınca yoktur.

☐ evet

***2. -**
İsim soyad:
Yaş:

3. cinsiyet
☐ kadın
☐ erkek

***4. Sürdürülebilirlik, ekoloji, çevre, doğa, ya da permakültür ile ilgili haberleri ya da yayınları takip ederim.**
Hayır
Bazen (hangi kaynaklar ve yayınlar, lütfen belirtiniz):
Evet (hangi kaynaklar ve yayınlar, lütfen belirtiniz):

***5. Sürdürülebilirlik, ekoloji, çevre, doğa, ya da permakültür gruplarına katılıyorum ya da bu konulardaki derneklere üyeyim.**
Hayır
Evet (Lütfen belirtiniz):

***6. Sürdürülebilirlik, ekoloji, çevre, doğa, ya da permakültür ile ilgili herhangi bir ders, kurs, çalıştay, konferans ya da geziye katıldım.**
Hayır
Evet (Lütfen belirtiniz):

D. SURVEY (TURKEY) ENGLISH TRANSLATION

Date:	No.
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Research Subject and Aim of the Study:

This questionnaire is prepared by Damla Özer, PhD student in the Middle East Technical University, Department of Industrial Design, to gather data for her PhD thesis. This research aims to research the reasons of widespread use of single-use disposable products; to understand the underlying patterns of and challenges for sustainable consumers' experiences with single-use disposable products; and to investigate how sustainable consumers relate themselves to these products.

* Consent and Anonymity

All information given here will be used only in academic studies; on the condition that my name will remain anonymous. The researcher Damla Özer is allowed to use the information I give here, in her doctoral thesis and academic publications.

☐ Yes

* Name Surname:

Age:

Gender: ☐female ☐male

4. I follow the news or publications related to sustainability, ecology, environment, nature, or permaculture.	No <input type="checkbox"/> Sometimes <input type="checkbox"/> (please indicate which sources or publications): Yes <input type="checkbox"/> (please indicate which
--	---

	sources or publications):
5. I am a member (or I follow) of groups or organizations related to sustainability, ecology, environment, nature, or permaculture.	No <input type="checkbox"/> Yes <input type="checkbox"/> (please indicate):
6. * I have attended a course, training, workshop, conference or participated in a trip, related to sustainability, ecology, environment, nature, or permaculture.	No <input type="checkbox"/> Yes <input type="checkbox"/> (please indicate):

7. Which single-use disposable products do you **use**?
8. Generally, which single-use disposable products do you **use most in amount**?
9. Which single-use disposable products do you **encounter most** in amount, even you use or do not use?
10. Are there any of single-use disposable products that you **re-use**? (If there is, which ones? Could you explain?)
11. Are there any of single-use disposable products which you **keep and could not throw away or recycle**? (If there are, which ones? Could you explain the reasons?)
12. According to you, which single-use disposable products are **the most important**? Which ones are the most prominent ones in your life? Are there any of them which you see as inevitable or indispensable? (Could you please explain the reasons?)
13. According to you, which **single-use disposable** products are the most problematical? (Could you please explain the reasons?)

14. According to you, in general, are there any problems with disposable products? (If there is, could you please explain the reasons?)
15. When you go to any kind of market or shopping, which of the carriage bags are you using, such as plastic bags, cloth bags, paper bags, string bags? (Could you please explain the reasons?)
16. Why do you think disposable products are widely used? (Could you please explain?)

PLEASE ANSWER THE 3 QUESTIONS BELOW (17th, 18th and 19th) IF YOU ARE A PRODUCER AND / OR SELLER OF ORGANIC PRODUCTS:

1. Which of these do you use for carrying the products, such as plastic or wooden crates, cardboard / plastic boxes? Among these, are there any of them that you particularly prefer using or avoid from? (Could you please explain the reasons?)
2. Which of these do you provide while delivering products to consumers, such as plastic bags, paper bags, plastic / cardboard boxes, cloth bags? Among these, are there any of them that you particularly prefer using or avoid from? (Could you please explain the reasons?)
3. If you are selling products, during the sale, do you use single-use disposable products such as plastic gloves, wet wipes, tissue paper, etc.? (Could you please explain the reasons?)

20.a Please mark the **disposable single-use** products with an **X** do you use.

20.b Please rate the following products from 1 to 5 (*most used* to *less used*) that you use most in amount.

20.c Please rate the following products from 1 to 5 (*most problematical* to *less problematical*) that you think are the most problematical.

In the explanations section, if there are any, please write your reasons for using or not using these products; and / or alternatives that you use.

		20.a	20.b	20.c	21.
		Put an X if you use:	Please list the first 5 Products you use most:	Please list the first 5 Products most problematic:	Explanations (If needed)
FOOD & BEVERAGE	Food packaging				
	Beverage packaging				
	Plastic refrigerator bag / locked bag				
	Plastic fork, spoon, knife, stirrer				
	Plastic / paper beverage cup				
	Drinking straw				
	Toothpick				
	Stretch wrap				
	Cupcake wrappers				
	Coffee filters				
CARRYING / TRANSPORT	Garbage bag				
	Plastic bag				
	Paper bag				
CLEANING, CARE	Diapers				
	Hygienic pad / tampon				
	Wet wipe				
	Toilet paper				
	Paper napkin / tissue paper				
	Cotton swabs (buds)				

	Dental floss				
	Cosmetic packaging				
	Cleaning materials packaging				
	Overshoe (Galosh)				
	Disposable slippers				
MEDICAL	Condom				
	Sticking plaster				
	Plastic gloves				
	Injection syringe				
	Needle / tattoo needle				
	Other medical equipments / materials (face mask, test kit, serum bottle, surgical cover, specimen cup, etc.)				
OTHERS	Gift box / wrapper				
	Party decorations				
	Bus ticket / road ticket				
	Phone card				
	Disposable camera				
	Disposable memory stick (removable disk)				
	Plastic cover used at construction sites				
	Paper / plastic toilet seat cover				
	Paper (A3, A4, etc.)				
	Batteries				
	Fountain pen cartridge				
	Printer cartridge				
	Other packaging (medicine box, paint box, plastic bags of plant seedling, electronic equipment / hardware / stationery / kitchen equipment box / packaging, etc.)				
	OTHER (please indicate)				

22. Whom would you recommend me that could contribute to this study? (If there are, please indicate their contact information)

23. * Would you like to participate in the continuation of this study (approximately 40-50 minutes interview)? (if yes, please indicate your contact information)

e-mail:

Phone:

Location (city):

24. Are there any points that you would like to ask or you would like to add about this study?

THANK YOU VERY MUCH FOR YOUR CONTRIBUTION.

E. INTERVIEW GUIDELINE (TURKEY)

Tarih: /	No:
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Araştırma Konusu ve Amacı:

Bu görüşme Orta Doğu Teknik Üniversitesi, Endüstri Ürünleri Tasarımı Bölümü'nde doktora öğrencisi Damla Özer tarafından, doktora çalışmasına veri oluşturmak amacıyla hazırlanmıştır. Çalışmanın amacı, kullan-at ürünlerin yaygın kullanımının nedenlerini araştırmak; sorumlu kullanıcıların kullan-at ürünlerle olan deneyimlerinde davranış biçimlerini ve yaşadıkları çelişkileri anlamak; ve sorumlu kullanıcıların bu tip ürünlerle nasıl bir ilişki kurduğunu incelemektir.

İzin ve Gizlilik

Burada verdiğim tüm bilgiler –ismim gizli kalmak koşulu ile– sadece bilimsel çalışmalarda kullanılacaktır. Araştırmacı Damla Özer'in buradaki bilgileri doktora tezinde ve bilimsel makalelerde kullanmasında bir sakınca yoktur. Görüşmede ses kaydı yapılmasına ve üzerinde konuşulan nesnelerin fotoğraflarının çekilmesine izin veriyorum. Ses kayıtları, notlar ve fotoğraflar araştırmacı tarafından saklanacaktır; ve sadece araştırmacı ve tez danışmanı tarafından görülecektir. Bu çalışmaya katılmaktan istediğim anda vazgeçebilirim.

İsim

☐ imza

Araştırmacının bu görüşmenin özet sonuçlarını bana göndermesini istiyorum.

☐ evet ☐ hayır

e-posta:

Katkılarınız için çok teşekkürler.

Yaş-cinsiyet: - K E

Meslek:

İş:

Yaşadığı yer: (Büyük şehir - İlçe - Kırsal)

Ev: (Apartman daresi - Müstakil ev - diğer)

Notlar: (Yaşadığı yere yakın geri dönüşüm kutusu var mı?)

Ev halkı kaç kişi: Çocuklar:

Görüşme Kılavuzu 1. Aşama (Ses kaydı)

Hangi tek kullanımlık kullan-at ürünlerin vazgeçilmez / kaçınılmaz olduğunu düşünüyorsunuz, ve hangilerini kullanmayı bırakabilirdiniz (reddedebilirdiniz)?
Tek kullanımlık kullan-at ürünleri ne zaman, hangi durumlarda kullanmak zorunda kalıyorsunuz / ya da tercih ediyorsunuz?
Tek kullanımlık kullan-at ürünleri kullanmaktan kaçındığınız durumlar var mı? Eğer evetse hangileri? Nasıl durumlarda, hangi yollarla?
Tek kullanımlık kullan-at nesnelerden yeniden kullanmıyorsanız da, çöpe ya da geri-dönüşüm'e atamadıklarınız , sakladıklarınız / beklettikleriniz var mı? (Varsa hangileri, ve nedenlerini açıklar mısınız?)
İşe yaramadığı halde bir gün bir işe yarar umuduyla sakladıklarınız var mı?
Ambalaj özelliklerinden dolayı özellikle tercih ettiğiniz ya da kaçındığınız ürünler var mı?
Genel olarak tek kullanımlık kullan-at ürünlerin hayatınıza etkileri nelerdir?

(Olumlu ya da olumsuz etkileri var mı? Varsa hangi durumlarda?)
Evinizde ya da ofisinizde sakladığınız / tuttuğunuz tek kullanımlık kullan-at ürünlerden -en az bir tanesi yiyecek-içeceklerle ilgili olan- 3 tanesini üzerinde konuşmak üzere yanınızda getirebilir misiniz? Ya da fotoğraflarını çekebilir misiniz? (<i>Görsel kayıt</i>)

Örnekler:

2. Aşama (Ses kaydı ve Fotoğraf)

Bu 3 tek kullanımlık kullan-at ürünü nasıl edindiniz? (satın almakla, bir başkasının vermesiyle, evdeki diğer bireylerin getirmesiyle gibi?)
Bu 3 üründen ortalama haftada / ayda kaç tane kullanıyorsunuz?
Bu 3 tek kullanımlık kullan-at ürünle nasıl bir deneyim yaşıyorsunuz? Ne kadar zaman evde tutuyorsunuz? Eğer atıyorsanız, nasıl atıyorsunuz? İlk kullanımı dışında tekrar kullanıyor musunuz? (varsa <i>Görsel kayıt</i>)
Yeniden kullanımın ötesinde, farklı bağlamlarda kullandığınız oluyor mu? (keserek, farklı forma sokarak vb. Hangi kısımları yeniden kullanımda değerlendiriyor?) (varsa <i>Görsel kayıt</i>)
Bu 3 tek kullanımlık kullan-at ürünü kullanmanın ya da kullanmamanın yaşam tarzınızı nasıl etkilediğini düşünüyorsunuz? (olumlu ve olumsuz yanlarını açıklar mısınız?)
Bu tek kullanımlık kullan-at ürünlerin herhangi bir faydası, hayatınıza katkısı var mı? Varsa nelerdir, açıklar mısınız?

Bu 3 nesne olmasaydı ne olurdu? Onlarsız yaşam nasıl olurdu?
Bu tek kullanımlık kullan-at ürünler için farklı alternatifler araştırıyor musunuz? Evetse bugüne kadar nasıl girişimleriniz oldu? (varsa Görsel kayıt)
Eğer bu 3 tek kullanımlık kullan-at ürünü kullanmaktan kaçınıyorsanız ya da alternatifler arıyorsanız, günlük hayatınız üzerinde ne gibi etkileri oluyor? (Varsa ürünler üzerinden örnekler verebilir misiniz?)
Bu 3 nesneyi günlük aktivitelerinizi düşünerek, hız, mobilite, hijyen, konfor, rahatlık açılarından nasıl değerlendirirsiniz? Genel olarak tüm tek kullanımlık kullan-at ürünleri, günlük aktivitelerinizi düşünerek, hız, mobilite, hijyen, konfor, rahatlık açılarından nasıl değerlendirirsiniz?
Depozitolu içecek şişeleri ile ilgili ne düşünüyorsunuz?
Doğada çözünebilen (<i>bio-degradable</i>) poşetler ile ilgili ne düşünüyorsunuz?
Sizin bu çalışma ile ilgili eklemek ya da sormak istediğiniz herhangi birşey var mı?

Ses Kaydı: dk. + dk.= dk. **Fotoğraf:** adet ham

F. INTERVIEW GUIDELINE (TURKEY) ENGLISH TRANSLATION

Date: / time:	No:
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Research Subject and Aim of the Study:

This questionnaire is prepared by Damla Özer, PhD student in the Middle East Technical University, Department of Industrial Design, to gather data for her PhD thesis. This research aims to research the reasons of widespread use of single-use disposable products; to understand the underlying patterns of and challenges for responsible consumers` experiences with single-use disposable products; and to investigate how responsible consumers relate themselves to these products.

Consent and Anonymity

All information given here will be used only in academic studies; on the condition that my name will remain anonymous. The researcher Damla Özer is allowed to use the information I give here, in her doctoral thesis and academic publications. I allow the researcher to voice record this interview and to take photos of the products at issue. Voice records, notes and photographs will be kept by the researcher. I may withdraw from the study whenever I need.

Name signature

I would like that the researcher sends me the summary results of this interview.

☐ Yes ☐ No

e-mail:

Thank you very much for your contribution.

Age-Sex: M-F

Profession:

Job:

Place lived: Big city-Town-Rural

House: Apartment - Detached house - Other

Notes: (Are there any recycle bins close to the place of residence?)

Number of the household: Number of the children:

Interview Phase 1 (*voice recording*)

Which single use disposable products do you think are indispensable, and which ones could you give up or reject?
In what situations do you have to use these kinds of products, or do you prefer them?
Are there any situations when you try to avoid single use disposable products? If yes, which ones? In what kind of situations and how?
Are there any single use disposable products which you keep and cannot throw away or recycle? (If there are, which ones? And could you explain the reasons.) Do you save some things that are not useful now, in the hope that they might be useful some day?
Do you have any products especially preferred due to the Packaging properties or avoided ones?
In general, what are the effects of the single use disposable products to your life? (Are there any positive or negative effects? in what kind of situations?)
Please bring three examples of single use disposable products that you keep at home or your office (-at least one-from the food-beverage-category) with you, or photographs of these products. (<i>photography</i>)

Examples:

- 1.
- 2.
- 3.

Interview Phase 2 (voice recording and photography)

How do you acquire these three single use disposable products that you bring along with you (such as buying, given by someone else, brought home by other members of the household)?
How many of these three products do you use in a month or week?
How do you relate with these three single use disposable products? How long do you keep these products? If you dispose them, how do you dispose? Do you re-use these products after their initial use? (<i>photography</i>)
Beyond re-use, do you re-use in different types, or re-contextualize these three products? (With cutting, giving another form? Which parts are re-used?) (<i>photography</i>)
How do you think your lifestyle is affected by using or not using these three single use disposable products? (What are the advantages and disadvantages?)
Are there any benefits of these three single use disposable products, and their contributions to your life? (If yes, could you explain.)
How would it be if these three objects were nonexistent? How would life be without them?
Are you searching for alternatives for these single use disposable products? What attempts have you done so far? (<i>photography</i>)
What are the implications for your daily life, if you are searching for alternatives or avoiding using these products? (If there is, could you exemplify this through these products?)
How do you evaluate these three single use disposable products in terms of speed, mobility, hygiene, comfort, and convenience?

In your daily life activities, how do you evaluate the single use disposable products in general in terms of speed, mobility, hygiene, comfort, and convenience?
What do you think about returnable beverage bottles?
What do you think about bio-degradable plastic bags?
Are there any points that you would like to ask or you would like to add about this study?

Voice recording: minutes. Photographs: raw

G. QUOTATIONS FROM INTERVIEW (IN TURKISH)

P4: Özellikle kağıt mendil türü şeyleri evin içinde değil de dışarıda, temizlik eşyasına erişim olmadığı zaman kullanıyorum. (Section 6.1.1.1, Page 106)

P16: Bir sorun var. Büyük çoğunluğunun fazla farkında değilim. sadece farkına vardıklarımın da vicdan azabı hissediyorum. (Section 6.1.1.2, Page 107)

P5: Yaşam biçimini değiştirmeye yönelik arayışlar daha fazla. Şehir yaşamından nasıl kurtuluruz diye daha uzun vadeli arayışlarımız var. O durumda alışkanlıkları değiştirmek daha kolay olacağı için, diğer kullan-at nesneleri de daha az ya da hiç kullanmamak gibi birşey söz konusu olabilir.

Pipet gibi şeyler ilginç örnekler aslında, çünkü yeni alışkanlıklar oluşturuyor. Yeni alışkanlık oluştuktan sonra da ihtiyaç diyorsun. Bizim çocuklar mesela sütü pipetle içmek istiyor, çocuklar için çok çekici bir şey. Ama o olmasaydı içeceklerdi, pipetsiz de içeceklerdi. bir kültür oluşuyor, bir alışkanlık oluşuyor.

Tek kullanımlık terlikler, çok acil durumlar için diyeceğim ama, hep acil durumlar için diye başlayıp, ondan sonra alışkanlığa dönüşüyor. 30 yıl sonra herkes tek kullanımlık kullanırsa şaşırmayız. (Section 6.1.1.2, Page 107)

P5: Bireysel olarak herşeyi değiştiremeyeceğimiz için belli ortamlarda yaşamayı seçtiğimiz sürece biraz vazgeçilmez gibi görünüyor bazı şeyler. (Section 6.1.2.1, Page 108)

P13: Kahve alışkanlığım var, o da zorunda olduğum bir şey. Zorunda kalıyorum çünkü hiç öyle oturup da uzun uzun kahve içme süresince orada oturacak bir vaktim yok. (Section 6.1.2.1, Page 108)

P15: Evime de ıslak mendil hiç sokmuyorum. Çünkü hem temizliyormuş gibi gelmiyor, hem elimde rahatsız bir his bırakıyor, kalıntı bırakıyor diye düşünüyorum. Hem de manasız buluyorum böyle bir şeyi taşımayı. Her zaman suya sabuna dokunamıyorsun ama bana o, alternatif bir temizlik hissini vermiyor. Bir restorana gittiğimde önümüze 10 tane ıslak mendil sererler, ben almıyorum. (Section 6.1.2.2, Page 109)

P7: Şehirlerarası otobüste bir bardakla yapmaya çalışıyorum. Israrla alıyorlar onu, tutmuyorlar. Sanki mutlaka atılması lazım. (Section 6.1.2.4, Page 111)

P11: Turşu alırken cam kavanoz olmasına dikkat ederim, plastiğin ne kadar sağlıklı olduğunu bilmiyorum. Zaten petrol ürünü bazlı olduğu için sağlıklı olmadığını düşünebilirim. (Section 6.1.3.2, Page 112)

P13: 5 litrelik sıvı deterjanı almıyorum ya da o büyük ambalajları almamaya, küçükleri almaya çalışıyorum. küçükleri alınca daha çok ambalaj tüketiyorum gibi gözüküyor zaman içinde, ama bu sıvı deterjan kutusunu atarken, o kocaman bir şeyi bomboş çöp olarak atıyor olmak fikri özellikle sert plastik olan deterjan şişeleri, plastik büyük şişeler, çamaşır makinesi deterjanı, almaktan kaçınıyorum. Daha küçük ambalajda bir litre, bir buçuk litrelik ya da daha minik neyse onu almaya çalışıyorum. (Section 6.1.3.2, Page 113)

P5: Plastik gördüğümüz zaman irrit oluyoruz. (Section 6.1.3.3, Page 116)

P4: Bir ara Tang diye bir içecek vardı. Rezil bir plastik, Deterjan bile koymazsın içine o kadar aşağılık bir ambalajdı ki hiç tüketmedim. Cam taklidi, çok saçma rengi de gri, kirli gibi, Çok kötü. (Section 6.1.3.3, Page 116)

P4: Bir daha almayacağım zaten. Şu üstündeki cam ambalaj resmi zaten ayrı bir falso. çok superficial. çok yüzeysel, çok saçma. (Section 6.1.3.3, Page 116)

P10: Açık olarak alabileceklerimi alıyorum, ama duyarlılığım poşet kullanmamam üzerinden değil, onun daha taze olacağını düşünmemden kaynaklanıyor. Ekonomik bir motivasyonla ya da daha tazesini bulma motivasyonu yapıyorum artık. (Section 6.1.3.4, Page 118)

P2: (In this part, Participator talked originally in English.)

P9: Eskiden, kullandığım kozmetik ürünlerinin kapları vardı. Krem, şampuan, sıvı sabun gibi Onları gidip doldurtabiliyordum Fresh Line'dan (marka). Onların kapları boşaldığında, tek bir ambalajım oluyordu elimde, sürekli kullanılan bir kap oluyordu. Bir kere almam yeterli oluyordu. O ürünleri bıraktım, çünkü yağlara döndüm. O kaplarım da durur. (Section 6.1.4.1, Page 122)

P3: Yanımda şişem yoksa, suyum bittiyse plastik şişe mecburen alıyorum. Çünkü etrafta su içebileceğim bir çeşme yok, olsaydı oradan da bir şekilde içebilirdim. (Section 6.1.4.2, Page 122)

P4: Ne kadar depozitolu süt şişesi almak istesem de, firma karar verip piyasadan kaldırdığı iptal ettiği zaman, birşey yapamıyorum. Kullanıcı olarak elim kolum bağlı oluyor. (Section 6.1.4.2, Page 123)

P13: Ben severek tabi hepsini kullanmayı bırakabilirim ama bana bir seçenek sunulursa. (Section 6.1.4.2, Page 124)

P5: Gittiğim yerlerde mümkün olursa kendi bardağımı kullanabilmek için metal bir bardak edineyim diye araştırıyorum. Metal bardak kırılmaz etmez, istediğin yere götürebilirsin, köye gidersin, kampta kullanırsın. O yüzden, daha çok kullanımlı olduğu için. (Section 6.1.4.2, Page 125)

P1: Plastik bir hazne gibi huni şeklinde (*Moon cup*). Ama hiçbir şekilde iyi bir kullanım olduğunu düşünmedim, çok rahatsız, dokunması kötü bir şey. İnsan kullandığı nesneye ilk başta dokunarak bakarak anlam oluşturuyor, o kadar plastik o kadar yapay duruyor ki, istediği kadar tek kullanımlık olmasın, baştan öyle bir şeyi o fonksiyon için kullanmak istemedim. (Section 6.1.4.3, Page 126)

P8: Pil kullanmaktan pek memnun değilim. Keşke onu kullanmıyor olsaydım. Rechargeable da hiç almadım. Çünkü o da hem çok pahalı, hem onun için ayrı bir şarj aleti alacaksın. Bir de her yeni doldurduğunda biraz daha performansı düşüyor. O da zahmetli geliyor bana açıkçası. (Section 6.1.4.3, Page 126)

P14: Çöp poşeti almayıp dükkanlardan gelen poşetleri süpermarket poşetlerini kullanıyorum çöp poşeti niyetine. Ama o da aslında beni huzurlu etmiyor, güya doğada çözünür diye yazıyor üstünde. O da çok inandırıcı gelmiyor. o da sıkıntı yaratan bir başka nokta. Yerine ne konabilir bilmiyorum çöpü toplamak için evde. Ya da her seferinde çöp kovasını yıkamak lazım poşet koymadan koysak. (Section 6.1.5.1, Page 128)

P4: Toplu bir yemek olduğu zaman, balık malık pişireceğiz, o zaman rakı falan varsa, meyve suyu şişesini sofraya koymuyorum sürahi konuyor oraya, buz konuyor. Sunpride böyle köşede duruyor. masanın üzerinde değil de.

Araştırmacı: Sınıf ayırımına mı uğruyor?

P4: Evet, biraz uğruyor. ... Bu arada etiketini çıkarmadım. Hiç rahatsız etmiyor beni. (Section 6.1.5.1, Page 130)

P8: Sunpride, yaklaşık 5 cm. açıklığında. Ağzının açık olması avantaj, su şişesi olarak kullanmak çok pratik oluyor. Biraz da şişeyi kullanırım daha sonra diye, o yüzden aldım. (Section 6.1.5.1, Page 130)

P2: (In this part, Participator talked originally in English.)

P2: İyi bir saklama sistemi olması gerek, çünkü, ben biliyorum böyle bir kutu sakladım, ama o kutuyu nereye koydum, o noktada sistem biraz çöküyor. (Section 6.1.5.2, Page 135)

P1: Bunu denedim, bir gün bir şeyde kullanırım diye biriktirdiğim şey oldu. Ama gördüm ki uzun vadede bunlara bakım gerekiyor, sadece bir yere koymak yetmiyor, maintenance'ını sağlamak gerekiyor. Onu yapmadığın zaman yeniden kullanacağın zaman kötü olmuş çürümüş oluyorlar. Ya da unutmuş oluyorum böyle birşeyin olduğunu. Kendi tecrübelerimden gördüm ki birgün kullanırım diye biriktirmek pek faydalı değil. Bir kullanımı olacaksa o sırada düşünüp görüp ona göre tesbit edip bir

yer fonksiyon belirlemek gerekiyor. Kullanılmayacak bir şeyi elinin altında bulunmayan bir yere koyuyorsun. (Section 6.1.5.2, Page 135)

P8: Göz damlası kullanıyordum. Serum gibi tüp şeklinde, ucunu kırıp sıkarsınız. Gözyaşı damlalarını çöpe atamıyordum. Koca torba gözyaşı damlası. Bunları niye tutuyorum deyip, sonra sonunda attım, hiçbir şey yapmadım. O artık biraz psikolojik bir sorun olabilir. Bir şey yaparım diye tutmuşum herhalde. Çok fazla aynı malzemeden bir hammadde olarak kullanırım diye, belki tasarımcıyım diye. Ama öyle bir şeyim yok şu anda. (Section 6.1.5.2, Page 136)

P6: Eğer anında bir şeyi değerlendiremeyeceksem biriktirmeye karşıyım. Daha minimal sayıda eşyam olsun istiyorum o yüzden atıyorum. (Section 6.1.5.2, Page 138)

P4: Kadınlar çok biriktiriyor bunları galiba. Çünkü birine yemek götürecek oluyorlar, pıt koyuyorlar. Çünkü yemek verdiğin zaman geri dönüp dönmeyeceğini bilmiyorsun. Plastik kabı verdiğin zaman geri dönmesi de senin için problem olmuyor. Vazgeçebileceğin bir ürün olduğu için, esas neden bu aslında bence onların biriktirilmesindeki. (...) Eski sefer taşı olayı kalmadı artık, kimse onlarla uğraşmıyor. (Section 6.1.5.2, Page 140)

P16: Kağıtları kesinlikle atmıyorum, atamıyorum. Bir şekilde kullanırım diye bekletiyorum. Ama bazen de abartıyorum da, hakikaten. Öyle bir takıntım var. (Section 6.1.5.2, Page 140)

P6: Her şeyi bir adım önceden planlama isteğimizi, gereksinimimizi ortadan kaldırıyor, çünkü istediğimiz zaman su bulabiliyoruz, veya, plastik çatal bıçak bulabiliyoruz acil bir zamanda. Bu şekilde hem yaşamımızı kolaylaştırıyor. (Section 6.2.1.2, Page 145)

P6: Bu tüketim bir şeyi yeniden yıkayayım, temizleyeyim tekrar kullanayım ihtiyacımızı kaldırıyor. Zaman kazandırıyor. (Section 6.2.1.2, Page 145)

P8: Maintenance diyebilirim, öyle bir hizmetten kurtardığı için benim hayatımın hızına daha rahat ayak uydurabiliyor aslında bu kullan-at ürünler. (Section 6.2.1.2, Page 145)

P12: Bu yaşla da ilgili bir şey, enerjinin olmasıyla da ilgili. Yaşlandıkça konfor önem kazanıyor olabilir. Yaşlandıkça yaptığın işi azaltma eğilimi oluyor. Çünkü bıkmış oluyorsun, ve enerjin azalıyor, kullan-at birşey tercih edebiliyor. Birşeyi atmak kolaylık oluyor tabi. (Section 6.2.1.3, Page 146)

P13: Bebek bezi eskiden o da çok canımı sıkkardı benim. Hakikaten onu hiçbir şey yapamadan atmak var ya kirli olanı. Müthiş bir rahatlıktı eminim. O bebek bezi hakikaten şu tek kullanımlık ürünlerin içinde, hijyenik ped bir, belki onunla bile baş

edilebilir ona çok kafayı takarsan daha eski yöntemlere dönülebilir ama bebek bezi inanılmaz bir rahatlık tabi. Rahatlık fakat onu öyle atıyor olmak, o pislikle atıyor olmak beni her zaman çok rahatsız etti ve ben her zaman. İki çocuğum da iki buçuk yıl civarında kullandılar herhalde. O kadar süre boyunca onları hep bu tıbbi atık bizim Mediko'nun çöpüne falan getirmeye çalıştım ki başka çöplere bari karışmasın diye. Çünkü zaten bir kabus oluyor hayat. Tempo, çocuk olunca. Ve zaten çok duyarlı oluyorsun onun sağlığına, hijyenine. (Section 6.2.1.4, Page 147)

P4: Şu andaki mevcut hayat tarzlarını düşünürsek buradaki katkıların hepsini sağladığını düşünebiliriz, hız, mobilite, konfor, hijyen, rahatlık. Çünkü gündelik hayatta hızlı yaşıyoruz. (Section 6.2.1.5, Page 148)

P13: Plastik çatal bıçaklar bir pikniğe vesaire gittiğimizde ya da barbekü yaptığımızda çok süper oluyor: Kocaman bir poşetin içine herkes elindekileri doldursun onu öylece bağlayayım, geri dönüşümü olan bir yere atmak müthiş bir şey. Bir anda bulaşık kâbusundan kurtuluyorsun, o müthiş. Zaman kazandıran bir şey, çok rahatlatan ferahlatan da bir şey. (Section 6.2.1.5, Page 148)

P8: Özellikle bardak kullanıyorum. Mobilite açısından bence çok etkili, bizim çok mobil olmamızla. Aslında biraz aklımıza estiği an erişebildiğimiz için içiyor, kullanıyoruz bu bardakları. Biraz hayatın hızından da kaynaklı, hız 'pace of life' gibi düşünüyorum. (Section 6.2.1.6, Page 149)

P4: Erişilebilirlik daha kolay olduğu için, bakkala git parayı ver al. (Section 6.2.1.7, Page 150)

P16: Farkına vardıklarımın vicdan azabı hissediyorum. (Section 6.2.2, Page 151)

P14: Elimden geldiğince kısıyorum, ama kolayıma da geliyor konforuma düşkünlüğüm ne yazık ki öyle. Hâlbuki böyle giderse yakında konfor diye bir şey kalamayacak. Ve şimdiden adım atsak iyi ederiz. (Section 6.2.2, Page 151)

P2: (In this part, Participator talked originally in English.)

P4: Her zamanki gibi alışveriş merkezine gidiliyor. Geçende öyleydi, lahmacun yiyeyim dedim geleneksel, o bile fastfood'a dönüşmüş. Tabak mabak yok, altına koydukları şey plastik. Hiç koyma daha iyi. O tepsinin üzerinde kâğıtta yiyeyim daha iyi. O kadar böyle şey hastalık derecesine gelmiş ki sürekli onları koyuyorlar. Yiyecek içecek take-out'ların bence çok olumlu bir katkısı yok. (Section 6.2.2, Page 151-152)

P12: Tek kullanımlık kullan-at ürünler genelde herhangi bir kullan-at ürün olarak üretildiği için, özellikle kaliteli veya özenilmiş şeyler olmuyor. Ve gıda ambalajlarında çok özenilmedikleri için bence tehlikeli durumlar bile olabilir. (Section 6.2.2, Page 152)

P12: Sadece bir kere kullanayım diye yapılmış, onca işlem, bir ürünün üretilmiş olması benim beş dakikalık bir kullanımım için, bana sağladığı rahatlık diye bir düşünce aklımın ucundan geçemiyor. (Section 6.2.2.1, Page 153)

P9: Suni oluyor. O yüzden de çok hijyenik bulmuyorum, çok sağlıklı bulmuyorum. Rahatlığı da batıyor o zaman bana. (Section 6.2.2.1, Page 153)

P5: Plastik kağıt içecek bardağı ya da tabak, bunları biz seçmiyoruz genellikle. bazı durumlarda bana servis yapılan bir yerde önüme bunların getirilmesi durumunda bana hiçbir getirisi yok aslında. Ve o noktada orası bir profesyonel işletme olduğu için çok da büyük bir zorluk olmadan aslında yıkanabilir ürünleri verebilirler. Bence o açıdan servis yapılan yerlerde plastik çatal bıçak kaşık tabak gibi şeylerin kimseye pek bir faydası olduğunu düşünmüyorum maliyet dışında, daha kolay vazgeçilebilir şeyler bence bunlar.servis söz konusu olduğu zaman en rahatsız edici olan o benim açımdan. Gidiyorsunu bir yerde önünüze plastik ya da kağıt bardak gelmesi bence en başta mücadele edilebilecek alanlardan bir tanesi, çünkü bunun çok fazla gerekçesi yok. (Section 6.2.2.1, Page 153)

P1: Bu ürünlerin çoğunun hammaddesi plastik, ve ben plastiğe dokunmaktan, etrafımda plastik şeyler olmasından, plastiği çoğaltmaktan çok rahatsızlık duyuyorum. Plastiği bir malzeme olarak hiç sevmiyorum. İsteddiği kadar bana bişeyler katıyor gibi olsun, ben o şeyi sevmediğim için o yan faktörleri benim için çok anlam ifade etmiyor. (Section 6.2.2.1, Page 153-154)

P16: Maalesef hayatı çok kolaylaştırıyor. (Section 6.2.2.2, Page 154)

P5: Konfor, her aşamada o bizim zaafımız, o kullanılıyor endüstriyel tasarım tarafından da. Alışverişte hemen, birazcık hız sağlaması, birazcık taşıma kolaylığı sağlaması küçük bir avantaj yarattığı noktada hemen yönelebiliyoruz. Evet, rahatlık, ya da rahavet, var bir şeyler. (Section 6.2.2.2, Page 154)

P15: Hız, mobilite, hijyen, konfor biraz insanı yanıltıcı ve son dönemde çok bize dayatılan şeyler. (Section 6.2.2.2, Page 154)

P1: Bazı anlamlarda hız katarken bazı açılardan da zamanımı alıyor. Onun için totalde bana fayda sağlamıyor. (Section 6.2.2.2, Page 155)

P5: Hız sağlıyor diyeceğim, ama hız sağlamaktan çok zaten hızlı olan hayatımızla uyumlu görünüyor daha çok. Gerçekten inanılır ölçülerde olmayan bir zaman problemi var. (...) Alternatiflere erişimimiz tam olmadığı için yaşam biçimimizde bazı şeyleri tam değiştiremediğimiz için hızlılık adına tek kullanımlık ürünler avantaj sağlıyor genellikle. (Section 6.2.2.2, Page 155)

P10: Hayatıma katkısı, herhangi başka bir şey taşıma gereği kalmıyor. Dolayısıyla aramızda sürtünmesiz bir ilişki gerçekleşiyor. Hayatım yüksüz geçiyor. Yüklü

başkası satın almış, sana da satmış oluyor. Katkısı bu. Yani buna katkı denebilirse. (Section 6.2.2.2, Page 155)

P15: Hız, mobilite, hijyen, konfor biraz insanı yanıltıcı ve son dönemde çok bize dayatılan şeyler. (Section 6.2.2.2, Page 156)

P5: Galoşun biraz çarpık bir hijyen anlayışından fazla beslendiğini düşünüyorum. Doğal bir hijyenin daha anlamlı olduğuna inanıyorum. Çünkü çok fazla hijyenik yapmaya kalktığınız anda bir yeri, belli mikropların ve virüslerin daha fazla üremesi için de bir imkan yaratıyoruz aslında. Orası çok steril hale geliyor, ve sterillik hijyen demek değil bana göre. (Section 6.2.2.2, Page 157)

P12: Bazen hakikaten duyduklarıma gördüklerime inanamıyorum, ve bir korku yaratıyorlar, özellikle de çocuk sağlığı üzerinden, ve tek kullanımlık kullanat ürünlerin bunu kullanarak pazarlandığını düşünüyorum. Açıkçası, hijyen çok başka şekillerde çözülebilecek bir şey, ve o kadar da, tehdit içeren bir çağda yaşamıyoruz; mikroplardan daha tehlikeli kimyasallarla yüzyüzeyiz. Hijyense odur benim için, toksik maddelerdir. Tamamen pompalanan bir şey. Temizlik ürünleri, tek kullanımlık ürünler ve ambalaj sanayisi tarafından gereksiz yere abartıldığını... (Section 6.2.2.2, Page 157)

P8: İlk kullanıcının sen olması ve bir kere kullanılması her zaman hijyene delalet değildir bence. Çünkü bu da fabrikadan çıkıyor sonuçta. (Section 6.2.2.2, Page 157)

H. SURVEY I (JAPAN)

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7. よく利用している使い捨て製品は何でしょうか？該当するものに○をご記入ください。複数回答可。
8. 重要だと思う使い捨て製品は何ですか？生活に役に立つもの、消費価値があるもの、不可欠なものに○をご記入ください。その理由もぜひご記入ください。複数回答可。
9. 厄介なもの、問題があると思う使い捨て製品は何でしょうか？該当するものに○をご記入ください。その理由もぜひご記入ください。複数回答可。

	使い捨て製品	6. 利用している	7. よく利用している	8. 重要	9. 問題と思う	理由

1.	レジ袋					
2.	ビニール製食品包装材					
3.	ビニール以外の食品包装材 (ガラス製、金属製、紙製等)					
4.	プラスチック製のフォーク、スプーン、ナイフ、マドラー					
5.	割り箸					
6.	ペットボトル					
7.	ペットボトル以外の飲料包装材 (ガラス瓶、缶、テトラパック等)					
8.	プラスチックコップ/紙コップ					
9.	プラスチック容器/食品包装材以外のプラスチック包装材 (洗剤容器、化粧品容器等)					
10.	紙					
11.	新聞					
12.	ごみ袋					
13.	ビニール袋、ジッパー付きビニール袋					
14.	ラップ					
15.	紙おしぼり					
16.	生理用ナプキン/タンポン					
17.	紙おむつ					
18.	ナプキン/ティッシュ					
19.	トイレットペーパー					
20.	電池					
	その他(具体的に)					

10. 使い捨て製品を再利用する、または使用後に再利用せずに捨てないことがありますか？○をご記入ください。もしありましたら、それはどのような製品ですか？次表にご記入ください。

その理由もぜひご記入ください。複数回答可。

	使い捨て製品	再利用する	再利用方法	捨てない	理由
1.	レジ袋				
2.	ビニール製食品包装材				
3.	ビニール以外の食品包装材 (ガラス製、金属製、紙製等)				
4.	プラスチック製のフォーク、スプーン、ナイフ、マドラー				
5.	割り箸				
6.	ペットボトル				
7.	ペットボトル以外の飲料包装材 (ガラス瓶、缶、テトラパック等)				
8.	プラスチックコップ/紙コップ				
9.	プラスチック容器/食品包装材以外のプラスチック包装材 (洗剤容器、化粧品容器等)				
10.	紙				
11.	新聞				
12.	飲み物以外のガラス製の瓶 (例: ジャムの瓶)				
13.	箱 (お土産の箱、ダンボール等)				
	その他 (具体的に)				

11. 普段の買い物の際、どのようなバッグを利用していますか？該当するものに○をご記入ください。 また、利用する理由も併せて次表にご記入ください。複数回答可。

	バッグの種類	○	利用する理由
1.	レジ袋		
2.	再利用レジ袋		
3.	紙製バッグ		
4.	ビニール製バッグ（エコバッグ）		
5.	布製バッグ（エコバッグ）		
6.	マイバッグまたはリュック/スポーツバッグ		
7.	ショッピングカート（キャスターバッグ）		
8.	風呂敷		
	その他（具体的に）		

12. 風呂敷についてどう思いますか。該当するものに○をご記入ください。また、理由も併せて次表にご記入ください。複数回答可。

	○	理由
よく使う		
時々使う		
あまり使わない		
全然使わない		
レジ袋の代わりに風呂敷を使う		
風呂敷は環境保護に役立っていると思う		
その他（具体的に）		

13. 割り箸についてどう思いますか。該当するものに○をご記入ください。

また、理由も併せて次表にご記入ください。複数回答可。

	○	理由
よく使う		
時々使う		
あまり使わない		
全然使わない		
割り箸の代わりにマイ箸を使う		
マイ箸は環境保護に役立っていると思う		
その他（具体的に）		

14. 弁当箱の日常の使用についてうかがいます。該当するものに○をご記入ください。また、理由も併せて次表にご記入ください。複数回答可。

	○	理由
よく使う		
時々使う		
あまり使わない		
全然使わない		
使い捨て弁当箱の代わりに自分の弁当箱を使う		
弁当箱は環境保護に役立っていると思う		
その他（具体的に）		

15. 使い捨て製品が広く普及している理由は何だと思われますか？該当するものに○をご記入ください。 詳細な理由があれば次表にご記入ください。複数回答可。

	使い捨て製品が広く普及している理由	○	詳細な理由
1.	実用的		
2.	便利		
3.	使いやすい		
4.	簡単に手に入る／手に入りやすい		
5.	清掃、洗浄が不要		
6.	携帯しやすい、または携帯する必要がない		
7.	安い		
8.	生産コストが低いと思われる		
9.	消費の習慣性、変え難い習慣性		
10.	使ったほうが楽なので		
11.	容易なイメージがある		
12.	忙しいライフスタイルのため		
13.	環境保全に無関心		
14.	環境保護に対する責任感がない		
15.	好ましい代替品がない		
16.	代替品が不足している、または不明である		
	わからない		
	使い捨て製品が広く普及しているとは思わない		
	その他（具体的に）		

16. 使い捨て商品を日常生活で使う中で感じていることをご自由にお書きください。

[迅速性（スピーディなライフスタイル）、携帯性、快適性、衛生面および利便性など]

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17. 使い捨て製品には環境的、社会的、文化的または経済的な問題や製品自体に問題がありますか？

該当するものに○をご記入ください。詳細な理由があれば次表にご記入ください。複数回答可。

	使い捨て製品の問題点	○	詳細な理由
1.	汚染、自然環境の破壊		
2.	人間や他の生物の健康被害		
3.	自然/資源の搾取		
4.	適切な/十分なリサイクルではない		
5.	廃棄物処理問題		
6.	衛生的な生活と廃棄物処理の矛盾		
7.	無駄/不要/過剰な消費		
8.	過剰生産、利用率や普及率の増加		
9.	存在自体/使い捨てであること自体		
10.	デザイン/機能性/景観の問題		
	わからない		
	問題なし		
	その他（具体的に）		

18. 追加調査にもご協力いただけますでしょうか？（例：再利用品、風呂敷、マイ箸、弁当箱の写真の　メール添付等をお願いするかもしれません）

はい（ ）（メールアドレスをご記入ください） メールアドレス:	いいえ（ ）
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19. ご意見やご質問があれば、次の欄にご自由にご記入ください。

(フィードバックのメールをご希望される場合は、メールアドレスをご記入ください):

メールアドレス:

-終わり-

ご協力ありがとうございました。

I. SURVEY I (JAPAN) ENGLISH TRANSLATION

Researcher: Damla Özer **e-mail:** damlaozer@yahoo.com

Kyushu University, Graduate School of Design, Department of Design,
Environmental and Heritage Design Course, Kondo Kayoko Research Laboratory

Survey (Adapted version for JAPAN) October 2012

Research Subject and Aim of the Study:

This questionnaire is prepared by Damla Özer, PhD student in the Middle East Technical University, Department of Industrial Design in Turkey, and a current research student in Kyushu University, Graduate School of Design, to gather data for her PhD thesis. This research aims to research the reasons of widespread use of single-use disposable products; to understand the underlying patterns of and challenges for sustainable consumers' experiences with single-use disposable products; and to investigate how sustainable consumers relate themselves to these products.

(The first version of this survey had been carried out in Ankara TURKEY in 2011.)

Consent and Anonymity

All information given here will be used only in academic studies; on the condition that the information will remain anonymous. The researcher Damla Özer is allowed to use the information I give here, in her doctoral thesis and academic publications. ☐ Yes

1. Age:	2. Gender <input type="checkbox"/> female <input type="checkbox"/> male
Nationality:	Current location (City):

3. Do you follow the news or publications related to eco-lifestyle, environment, ecology, nature, or sustainability? ☐ Yes ☐ Sometimes ☐ No

(Please write down at the table below):

	Name of the Publication / Resource (News, Journals, Websites, etc.)

4. Are you a member (or follow) of organizations, groups or associations related to eco-lifestyle, environment, ecology, nature, or sustainability? ☐ Yes ☐ No

(Please write down at the table below):

	Name of the Organization / Group / Association	Follow	Member

5. Have you attended a course, training, workshop, conference or participated in a field trip or do volunteer work, related to eco-lifestyle, environment, ecology, nature, or sustainability? ☐ Yes ☐ No *(Please write down at the table below):*

	Course / Training / Workshop / Conference / Field trip / Volunteer Work

6. Which **single-use disposable** products do you use? (*Please write down at the table below*) (Choose as many as needed)
7. Generally, which single-use disposable products do you use **most in amount**? (*Please write down at the table below*) (Choose as many as needed)
8. According to you, which single-use disposable products are the most **important**? Which ones are the most prominent ones in your life? Are there any of them which you see as inevitable or indispensable? (Could you please explain the reasons?) (*Please write down at the table below*) (Choose as many as needed)
9. According to you, which single-use disposable products are the most **problematical**? (Could you please explain the reasons?) (*Please write down at the table below*) (Choose as many as needed)

	Single-use Disposable Products	6. The Products that I use	7. the most used in amount	8. the most important	9. the most Problematical	Explanation of Reasons (if needed)
1.	Plastic bag					
2.	Plastic food packaging					
3.	Food packaging other than Plastic (glass, metal, paper, etc.)					
4.	Plastic fork, spoon, knife, stirrer					
5.	Disposable chopsticks (Waribashi)					
6.	PET bottle					
7.	Beverage packaging other than PET bottle (glass bottle, can, Tetra Pak, etc.)					
8.	Plastic / paper beverage cup					
9.	Plastic containers / Plastic packages other than food (cleaning materials, cosmetics, etc.)					
10.	Paper					
11.	Newspaper					
12.	Garbage bag					
13.	Locked bag / Refrigerator bag					
14.	Stretch wrap					
15.	Wet wipe					

16.	Hygienic pad / Tampon					
17.	Diaper					
18.	Napkin / tissue paper					
19.	Toilet paper					
20.	Battery					
	Others (please indicate)					

10. Are there any of **single-use disposable** products that you **re-use**, or **keep and do not want to throw away** (even though you do not re-use)? (If there is, which ones? Could you explain?) *(Please write down at the table below)* (Choose as many as needed)

	Single-use Disposable Products	Re-use	The way of re-use (How is it used as in the second time?)	Keep and don't throw away	Explanation of Reasons (if needed)
1.	Plastic bag				
2.	Plastic food packaging				
3.	Food packaging other than plastic (glass, metal, paper, etc.)				
4.	Plastic fork, spoon, knife, stirrer				
5.	Disposable chopsticks (Waribashi)				
6.	PET bottle				
7.	Beverage packaging other than PET bottle (glass bottle, can, Tetra Pak, etc.)				
8.	Plastic / paper beverage cup				
9.	Plastic containers / Plastic packages other than food (cleaning materials, cosmetics, etc.)				
10.	Paper				
11.	Newspaper				
12.	Glass jar other than beverage (jam etc.)				
13.	Box (present box, cardboard box, etc.)				
	Others (please indicate)				

11. When you go to any kind of market or shopping, which of the **carriage bags** are you using? (Could you please explain the reasons if needed?) (*Please write down at the table below*) (Choose as many as needed)

	Types of Bags	Check	Explanation of Reasons (if needed)
	Plastic bag		
	Plastic bag re-use repeatedly		
	Paper bag		
	Plastic re-usable eco-bag		
	Cloth eco-bag		
	Own bag or backpack / Sports bag		
	Handcart / Shopping trolley		
	Furoshiki (Japanese traditional wrapping cloth)		
	Others (please indicate)		

12. What do you think about *Furoshiki* (Japanese traditional wrapping cloth) (about its usage in daily life?) If you use them, how often you use? (*Please write down at the table below*) (Choose as many as needed)

	Check	Explanation of Reasons (if needed)
I frequently use Furoshiki.		
I sometimes use Furoshiki.		
I seldom use Furoshiki.		
I never use Furoshiki.		
I use Furoshiki as an alternative for plastic bag.		
I believe that using Furoshiki would help to protect the environment.		
Others (please explain)		

13. What do you think about *Waribashi* (Disposable chopsticks) (about its usage in daily life?) If you use them, how often you use? (*Please write down at the table below*) (Choose as many as needed)

	Check	Explanation of Reasons (if needed)
I frequently use Waribashi.		

I sometimes use Waribashi.		
I seldom use Waribashi.		
I never use Waribashi.		
I use my own chopstick (<i>My-hashhi</i>) as an alternative for Waribashi.		
I believe that using my own chopstick (<i>My-hashhi</i>) would help to protect the environment.		
Others (please explain)		

14. What do you think about *Bento* (re-usable lunch box) (about its usage in daily life?) If you use them, how often you use? (*Please write down at the table below*) (Choose as many as needed)

	Check	Explanation of Reasons (if needed)
I frequently use Bento.		
I sometimes use Bento.		
I seldom use Bento.		
I never use Bento.		
I use Bento as an alternative for buying single-use plastic packaged bento.		
I believe that using Bento would help to protect the environment.		
Others (please explain)		

15. **Why** do you think disposable products are widely used? (If there is, could you please explain if needed?) (*Please write down at the table below*) (Choose as many as needed)

	Reasons of 'widespread use' of single-use disposable products	Check	Detailed Explanations (if needed)
	Practical		
	Convenient		
	Easy to use		
	Easy to access / Accessible		
	No need for cleaning / washing		

	Ease of carrying / No need to carry		
	Cheap		
	Production cost seems low		
	Consumption habits, hard to change habits / Manipulation of habits		
	Laziness / Taking the easy way out		
	The image of easiness		
	Speedy / hectic lifestyle		
	Unawareness / unconsciousness (about environmental protection)		
	Irresponsibility / insensitivity (towards environment)		
	Alternatives are disadvantageous / unfavorable		
	No other / or not enough Alternatives (not knowing the alternatives)		
	I do not know / I have no idea.		
	No , I do not think they are widely used.		
	Others (please explain)		

16. In your daily life, how do you evaluate the single-use disposable products in general, in terms of speed (speedy lifestyle), mobility, hygiene, comfort, and convenience?

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17. According to you, are there any **problems** with single-use disposable products, in terms of environmental, social, cultural, and economical effects, or of the products themselves? (If there is, could you please explain if needed?) (*Please write down at the table below*) (Choose as many as needed)

	Problems with single-use disposable products	Check	Detailed Explanations (if needed)
	Pollution, environmental / natural damage		
	Damage to human (and living things) health		
	Exploitation of nature / resources		
	Not proper / enough recycling		
	Problems of Waste / disposal		

	Discrepancy between sanitized life and waste treatment		
	Wasteful / unnecessary / too much consumption		
	Produced too much / increase in use / being widespread		
	The very existence of them / their <i>being single-use</i>		
	Problems of design / functionality / aesthetics		
	I do not know / I have no idea.		
	No , there are no problems.		
	Others (please indicate)		

- 18.** Would you like to participate in the continuation of this study (such as sending photographs of the products that you are re-using, or Furoshiki, My-hashhi, and Bento)?

<input type="checkbox"/> Yes (If yes, Please indicate your contact information): E-mail Address:	<input type="checkbox"/> No
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Are there any points that you would like to **add** or you would like to **ask** about this study?

(If you would like to receive a reply, Please indicate your contact information): E-mail Address:
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-End of the Survey-

THANK YOU VERY MUCH FOR YOUR CONTRIBUTION.

J. SURVEY II (JAPAN)

皆様

日本はまだ残暑が厳しいかと思いますが、いかがお過ごしでしょうか。

大変ご無沙汰しております。

ダムラ・オゼルです。

2012 年に交換留学生として 1 年間、九州大学に在籍いたしました。

留学中には大変お世話になりました。ありがとうございました。

トルコ帰国後はずっと博士論文の作成に専念しておりますが、作成中にいろいろな問題が起こり、なかなかはかどらず、いつの間にかこんなに月日が経ってしまいました。

そのため、皆様には大変ご無沙汰してしまい、本当に申し訳ございません。

ご連絡が遅くなりましたことを心よりおわび申し上げます。

さて日本留学中には、私の博士論文のテーマである「使い捨て製品の使用・再利用状況調査および消費者の使い捨て製品に対する意識調査」に関するアンケートにご協力くださり、誠にありがとうございました。

その際、追加調査（再利用品、風呂敷、マイ箸、弁当箱の写真などのご提供）をお願いするかもしれない旨アンケートに記載いたしましたが、ご快諾いただき、ありがとうございます。

そこで、ご無沙汰していた上に突然このようなお願いをして申し訳ありませんが、以下の物を私にメールで送っていただけませんかでしょうか。

1. 再利用なさっている使い捨て製品の写真を 3～4 枚。
（ペットボトル、瓶、紙、スーパーの袋などを再利用している時の写真など）
2. （お使いになっている場合）風呂敷、マイ箸、弁当箱の写真を 3～4 枚。
使っている様子が分かる写真が 좋습니다。

(例：マイ箸を箸箱に入れているところ、弁当箱に中身が詰まっているところ、風呂敷を結んでいるところ、風呂敷に物を包んでいるところ、など)

※ 写真はカメラや携帯電話など、何を使って撮っていただいても構いません。

また、下記の項目にもお答えいただけますでしょうか。

1. 同居者人数（ご本人を含む）。
2. お子様の有無。お子様がいらっしゃる場合は人数もお教え下さい。
3. お住まいの住宅のタイプ。（例：アパート、一戸建てなど）
4. ご職業。

お忙しいところ、お手数をおかけして申し訳ございませんが、何卒よろしくお願い申し上げます。

2014 年 8 月 21 日

中東工科大学工業デザイン学部 博士課程
(元九州大学大学院芸術工学府・環境・遺産デザイン部門 交換留学生)
ダムラ・オゼル (Damla Özer)

K. SURVEY II (JAPAN) ENGLISH TRANSLATION

Dear All,

I am sorry disturbing you for the second time. This is Damla Özer. I have enrolled in Kyushu University as a research student for one year in 2012. I wish to thank you for helping my study in Japan. Thank you all!

I am continuing to work on my doctoral thesis after returning back to Turkey.

Thank you very much for answering the survey on single-use disposable products. The aim of this study is mentioned as below:

to research the reasons of widespread use of single-use disposable products; to understand the underlying patterns of and challenges for responsible consumers` experiences with single-use disposable products; and to investigate how responsible consumers relate themselves to these products.

At that time, in the survey I have asked as follows:

“Would you like to participate in the continuation of this study (such as sending photographs of the products that you are re-using, or Furoshiki, My-hashhi, and Bento)? “

Thank you for agreeing to participate.

So, I would be grateful if you could send me the following via e-mail:

1. 3-4 photos of disposable products that you re-use (photographs taken when you are re-using them, such as bottles, paper, box, or plastic bags, etc.)

2. 3-4 of photos of ‘Furoshiki’ wrapping cloth (if you have), ‘My-hashhi’ re-usable chopsticks, ‘Bento’ lunch box (photographs taken when you are using them, such as when you are wrapping things to Furoshiki, or putting My-hashhi in the chopstick case, or when packing your Bento, etc.)

* You can take the photographs with any camera or your mobile phone.

Lastly, could you please answer to the following questions?

- The number of your household (Including yourself)
- The number of children (if any)
- Type of housing you live (such as apartment, detached house)
- Your occupation

Thank you very much for your time.

Sincerely,

August 21, 2014

Middle East Technical University Department of Industrial Design, PhD candidate;

(Former Research Student in Kyushu University, Graduate School of Design, Department of Design, Environmental and Heritage Design Course, Kondo Kayoko Research Laboratory)

Damla Özer

L. ABSTRACT IN JAPANESE

要旨

一回使用の使い捨て製品を通じ、持続可能性・消費の調査

オゼル・ダムラ

博士課程、工業デザイン学科

指導教官：ナズ・ビョレキチ助教授

2017年6月、284 ページ

本論文の研究範囲は持続可能性や物質的文化、持続可能な消費等に関するものであり、そのコンテキストは一回使用の使い捨て製品の事例を扱うものである。本論文の目的は、持続可能な消費の観点から一回使用の使い捨て製品（SUDP）の広範な使用の意味とその理由を探ること及び責任のある消費者の SUDP との経験に関連する本格的なパターンと課題を理解すること、そして責任のある消費者がこれらの製品との関係性を調査することである。

本論文のために実施された研究は、定性的であり、その主要な分析方法としては内容分析が使用されている。データ収集は、トルコ出身の 191 名の参加者の SUDP の責任のある消費者の間で実施されたサーベイ調査と、それに続いて、サーベイ参加者の間でサンプリングされた 16 名の詳細なイン

タビュールにより行われた。日本でも同様の調査が 160 名の参加者で実施され、それに続き、6 名の参加者により 2 回目の調査も実施された。

調査結果によると、参加者にとって SUDP の中で最も問題のあるものは飲料包装、プラスチック袋および食品包装で、生態学的な観点から最も問題のある SUDP 材料はプラスチックだと考えられている。衛生、快適性、利便性、スピード、モビリティに対する継続的な需要は、SUDP を使用するための説得力となります。本調査では、環境問題に関する価値と行動のギャップが SUDP に関連した大きな問題と課題であることが明らかになり、つまりこれは、環境価値が常に人々の行動に反映されるとは限らないということを意味している。もう一つの課題は、参加者が SUDP のための代替手段の欠如や不足について頻繁に苦情を表現していることである。

本論文は、SUDP の使用を減らすための可能な解決策の提案で終わる。

キーワード：持続可能性、消費、持続可能な消費、一回使用の使い捨て製品、責任のある消費者

CURRICULUM VITAE

PERSONAL INFORMATION

Name, Surname: Damla Özer
Nationality: Turkish
Date of Birth: 1978
E-mail: damlaozer@gmail.com

EDUCATION

Degree	Institution	Year of Graduation
MS	METU Industrial Design	2004
BS	METU Industrial Design	2001

MS Thesis title: “Aims, Methods and Origins of Basic Design Courses in Industrial Design Programs in Turkey”

<http://library.metu.edu.tr/search/a{u00D6}zer%2C+Damla./ao~azer+damla/-3%2C-1%2C0%2CB/frameset&FF=ao~azer+damla&1%2C1%2C>

WORK EXPERIENCE

Year	Place	Enrollment
2013- Present	Department of Industrial Design at Anadolu University, Eskişehir	Part-time Instructor
2008-2010	Bilkent University, Department of Graphic Design	Instructor
2001-2008	METU Department of Industrial Design	Research Assistant

OTHER PROFESSIONAL EXPERIENCE

Edited and proofread the Turkish translations for Sinek Sekiz Publishing House:

- *February 2016* Home Grown, by Ben Hewitt,
- *November 2015* Living Beautifully with Uncertainty and Change, by Pema Chödrön,
- *October 2009* Ecology: A Pocket Guide by Ernest Callenbach.

July 2004 A member of the conference committee in the “Fourth International Conference of Design and Emotion” at METU, Ankara.

FOREIGN LANGUAGES

English (Advance)

Japanese (Japanese Language Proficiency Test, 2014 Level N4)

PUBLICATIONS

Conference Paper (Printed)

Özer, Damla. 2016. “Türkiye’de Sürdürülebilir Tüketim: Tek Kullanımlık Kullan-At Ürünler Örneği Üzerinden Bir İnceleme”. In *UTAK 2016 Bildiri Kitabı: Sorumluluk, Bağlam, Deneyim ve Tasarım*. (Second National Design Research Conference at the Middle East Technical University, in Ankara Turkey). eds. Börekçi, Naz A.G.Z., Koçyıldırım Dalsu, and Günay, Aslı. 419-434. Turkey. <http://coolincooler.com/utak2016-bildirikitabi.pdf>

WORKSHOPS, TRAININGS AND QUALIFICATION CERTIFICATES

April 2016 “Basic Design Workshop 1”, Anadolu University, in Eskişehir, Turkey (as one of the speakers) (duration: 2 days)

October 2015 “Introduction to Permaculture Education” at the Middle East Technical University, in Ankara, Turkey (duration: 2 days)

October 2013-June 2014 YogaŞala Ankara, 200 hours International Yoga Alliance Teachers Training Certificate Program (duration: 9 months)

September 2011 “Anadolu Jam” Workshop, organized in collaboration with Yes! Foundation, in Bayramiç, Çanakkale, Turkey (participated with scholarship) (duration: 5 days)

November 2009 “Visions for Sustainable Futures, Scenario Maps and Innovation Paths” at the Middle East Technical University, in Ankara, Turkey (duration: 2 days)

July 2009 ‘Innovation and Entrepreneurship’, ‘Business Plan Preparation’, ‘Intellectual Property Rights’, ‘Financial Modeling’, and ‘New Product Development’, trainings delivered by Middle East Technical University Technopolis, in Ankara, Turkey, during the course of the competition “New Ideas New Businesses”

June 2009 International Workshop of “Art of Hosting Participatory Leadership” in İstanbul, Turkey (duration: 4 days)

February 2009 “International Workshop on Planning for Sustainability: Dragon Dreaming” at the Middle East Technical University, in Ankara, Turkey (duration: 5 days)

July 2008 Ecology Education organized by TÜBİTAK (Scientific and Technological Research Council of Turkey) in Hatay, Turkey (participated with scholarship (duration: 10 days)

January 2008 Pass the examination of Trademark Attorneyship by TPE (Turkish Patent Institute).

October 2007 “International Sustainable Living Workshop” at the Middle East Technical University, in Ankara, Turkey (duration: 7 days)

AWARDS AND SCHOLARSHIPS

September 2011 - October 2012 received Japanese Government Scholarship (Monbukagakusho: MEXT).

2001 Altın Gönve Vestel A.Ş. and ETMK (Industrial Designers Society of Turkey) National design competition for students, First Prize (team work with Murat Alibaba, Sultan Kaygın, and Gökhan Mura).

MEMBERSHIPS

Buğday Association for the Support of Ecological Living

ETMK (Industrial Designers Society of Turkey)