ECO FRIENDLY PRODUCTS AND ENVIRONMENT: ROLE OF "URAVU" IN WAYANAD DISTRICT OF KERALA.

Minor Project Report Submitted to the University Grants Commission (UGC Reference No.F.No:MRP(H)-1942/11-12/ KLKA020/UGC-SRWO)

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CONTENTS

SL NO:	CONTENTS	PAGE NO:
Chapter 1	Introduction	1-11
	Statement of the problem	
	Review of literature	
	Significance of the study	
	Objective of the study	
	Research methodology	
Chapter 2	Theoretical background	12-17
Chapter 3	Respondents profile	18-21
Chapter 4	Analysis and interpretation	22-42
Chapter 5	Findings, Suggestions and Conclusions	43-46

LIST OF TABLES

Table No:	Contents	Page No:
3.1	Gender wise classification	18
3.2	Age wise classification	19
3.3	Educational qualification of respondents	20
3.4	Occupation	21
4.1	Knowledge about non-biodegradable packaging	22
4.2	Plastic has become a lifestyle	23
4.3	Before buying the labels are checked	24
	Eco-friendly products protect us from harmful effects of	
4.4	non-biodegradable products	25
4.5	Carry own bags to super market	26
4.6	Green life style is expensive and time consuming	27
4.7	Preference to purchase eco-friendly products	28
4.8	Know about "Uravu" through:	29
4.9	Visit to Uravu outlets	30
4.10	Quality of Uravu products	31
4.11	Uravu promotes eco-friendly products	32
4.12	Uravu preserves natural resources	33
4.13	Uravu helps in the development of eco products	34
4.14	Promotional activities of Uravu	35
4.15	Most effective promotional method of Uravu	36
	Factors considered while purchasing eco-friendly	
4.16	products	37
	Levels of satisfaction while choosing eco-friendly	
4.17	products	38
	Eco-friendly products are close substitute for plastic	
4.18	products	39
	Improve our environment by purchasing eco-friendly	
4.19	products	40
4.20	Promoting eco-friendly product is a necessity	41
	While purchasing preference will be given to product	
4.21	with least amount of pollution	42

LIST OF FIGURES

Figure No:	Contents	Page No:
3.1	Gender wise classification	18
3.2	Age wise classification	19
3.3	Educational qualification of respondents	20
3.4	Occupation	21
4.1	Knowledge about non-biodegradable packaging	22
4.2	Plastic has become a lifestyle	23
4.3	Before buying the labels are checked	24
	Eco-friendly products protect us from harmful effects of	
4.4	non-biodegradable products	25
4.5	Carry own bags to super market	26
4.6	Green life style is expensive and time consuming	27
4.7	Preference to purchase eco-friendly products	28
4.8	Know about "Uravu" through:	29
4.9	Visit to Uravu outlets	30
4.10	Quality of Uravu products	31
4.11	Uravu promotes eco-friendly products	32
4.12	Uravu preserves natural resources	33
4.13	Uravu helps in the development of eco products	34
4.14	Promotional activities of Uravu	35
4.15	Most effective promotional method of Uravu	36
	Factors considered while purchasing eco-friendly	
4.16	products	37
	Levels of satisfaction while choosing eco-friendly	
4.17	products	38
	Eco-friendly products are close substitute for plastic	
4.18	products	39
	Improve our environment by purchasing eco-friendly	
4.19	products	40
4.20	Promoting eco-friendly product is a necessity	41
	While purchasing preference will be given to product	
4.21	with least amount of pollution	42

CHAPTER-1

INTRODUCTION

Eco-friendly products are products that do not harm the environment, whether in their production, use or disposal. The word "eco-friendly" denotes the products or the activities of human beings in a way which is friendly to the environment. Eco-friendly products also known as green products are generally made with non-toxic locally obtained sustainable materials. A person being eco-friendly helps his surroundings to be less harmful to the fellow human beings and the animal around him. He does so, by using eco friendly products and by using organic chemicals instead of harsh ones for his purpose. Eco-friendly products are readily available now a day and these include small articles from handmade paper bags, jute bags, and recycled papers to eco-friendly fuels so on.

A true eco-friendly product which is friendly to the environment will cause only minimal harm to the people and environment. The manufacturing and consumption of these goods have a minimal impact to the environment. The product, including its parts or ingredient should not create a health risk. The most important reason why one should start using eco-friendly products is because of divesting effect of harmful gases, non-biodegradable plastics, dangerous gases which not only pollute the environment but also causes Respiratory problems in human beings. There are lots and lots of harmful effects of plastics, chemicals, non-biodegradable items, which is the main reason for us to start using eco-friendly products as soon as possible. One should know the importance of being eco-friendly. One can be earth friendly by using these products and by using organic chemicals instead of harsh ones for their purposes. To be very precise, being earth friendly or eco-friendly has become a necessity, that everybody should take part in.

Bamboo, one of the most versatile of all grass species in the planet, occupies a fairly important space in almost all cultures and civilizations, especially in Asia. From simple sheds to complex constructions and from pen stands to jewel boxes bamboo can be put to use to create a variety of

products. Bamboo, the green gold is the main raw material Uravu works with. Uravu undertakes several projects to protect bamboo as well as other natural resourses.

STATEMENT OF THE PROBLEM

There are lots and lots of harmful effects of plastics, chemicals, non-biodegradable items, which is the main reason for us to start using eco-friendly products as soon as possible. The dangerous gases produced by these items not only pollute our environment but also causes respiratory problems in human beings. Due to this polluted air and water there is a danger of complete extinction of various rare species of animals and birds. Not only this, but there is also a change in the global warming of the earth, which increases the earth's temperature, which in turn causes the green house effect.

REVIEW OF LITERATURE

Anne Marie Todd (2004) in the article 'The Aesthetic Turn in Green Marketing: Environmental Consumer Ethics of Natural Personal Care Products' analyzes the promotional materials of three companies that advertise their environmental consciousness: Burt's Bee's Inc., Tom's of Maine, Inc., and The Body Shop Inc. Responding to an increasing online shopping market, these companies make their promotional and marketing materials available online, and these webbased materials replicate their printed catalogs and indoor advertisements. As part of selling products to consumers based on a set of ideological values, these companies employ two specific discursive strategies to sell their products: they create enhanced notions of beauty by emphasizing the performance of their natural products, and thus infuse green consumerism with a unique environmental aesthetic. They also convey ideas of health through community values, which in turn enhances notions of personal health to include ecological well-being. This article explicates the ethical implications of a personal natural care discourse for eco-marketing strategies, and the significance of a green consumer aesthetic for environmental conscious- ness in general.

Magali Morel Francis Kwakye (2012) his research study is on the green marketing but specifically on consumers' attitudes and purchase intention of eco-friendly products The objective of this research was looked into and explored the influencing of the four traditional marketing-mix elements, satisfaction and word of mouth (WOM) on attitude and purchasing intentions of consumers on eco-friendly products specifically fasting moving consumer goods (FMCG) or non-durable ones. The purpose of the study was to obtain information from consumers' point of view. Furthermore, one perspective of the study was to look into the comparison of the Swedish and the Non-Swedish their attitudes towards eco-friendly products. A questionnaire provided to obtain the views of the Swedish and others nationalities, how they are influenced by the marketing-mix elements (4P), satisfaction and WOM concerning green attitudes and purchase intention of eco-friendly products. Our findings indicated that consumers who already bought eco-friendly products and those who are satisfied by these previous purchases were willing to repeat purchases

Babita Saini (2013) in her study 'Green marketing and its impact on consumer buying behaviour' she says that Green marketing is going to be proactive topic with it steps into the world of the consumers where consumers are not only aware for the multiple brands and their perceived quality but also they have started to pay more attention to the environment and thereby becoming more eco friendly. Therefore the companies are also exploring the various ways for communicating with the customers so that customers can be retained as loyal for long by adopting green management. The aim of the study is how consumer buying behavior is affected by the green marketing and how companies can get the competitive edge by adopting it. How demand could be enhanced by pursuing the green strategies and what challenges would be faced by the companies in going green. The results from this illustrates that companies need to increase their communication with the customers for going green, and that attributes like price and quality are more important than "environmental responsibility".

Annie Lefebure; Rafael Rosales Munoz; (2011) states that sustainable consumption has become a crucial factor to consider for both consumers and manufacturing firms. Green marketing practices, or activities aimed at decreasing the impact on the environment, have been incorporated into many business plans to combat old habits of wastefulness and pollution.

Cherian, Jacob; Jacob, Jolly (2012) states in their studies that increasing awareness on the various environmental problems had led a shift in the way consumers go about their life. There has been a change in consumer attitude towards a green lifestyle. People are actively trying to reduce their impact on environment. Organization and business however have seen their change in consumer attitude and are trying to gain an edge in the competitive market by exploiting the potential in the green market industry. This study introduces the concept of green marketing and look in to the various ways in which the different consumer attributes are related to the concept of green marketing.

Akram Ahmed Alodini (2008) in his study states that now, a variety of environmental problems affects our entire world. Many countries around the world are concerned about the environmental protection. Industrial sector is also playing important role to help and support this protection by producing green products that are environmentally friendly. However, this kind of products is usually expensive. The objective of this study is to understand the factors that could affect

customers to pay more for green products in University Sains Malaysia. The results showed that the consumers' attitude and behavior are the most consistent explanatory factors in predicting their willingness to pay more for green products. The research finding also shows that the segments of consumers who are willing to pay green products were more likely to be married. Another finding showed that local students are more willing to pay for the environmentally friendly products more than the international students.

Bhate &Lawler (1996), in their study found that environmentally friendly behaviour correlates significantly with innovativeness and go for green practice. Consumers can be influenced by their ethics and beliefs, for example, if they are motivated by 'moral' or 'material' ethics. Where consumers are motivated on 'moral' grounds, they move away from material consumerism that impact on environment.

Dr. B. Nagaraju, 1 Thejaswini H(2006) says that in recent days, environmental issues have received a great deal of discussion in the field of marketing. When the society becomes more concerned with the natural environment, businessmen have begun to modify their behavior to address the society's new concern. With the growing awareness about the implication of global warming, non-bio degradable solid waste, harmful impact of pollutants etc, both marketer and consumers are switching to eco-friendly products and many companies have accepted their responsibility not to harm the environment and not to waste the natural resources. The research study took place in Mysore district of Karnataka. A questionnaire is designed in order to find out the market awareness of eco-friendly products, to analyze the consumer perception towards eco-friendly products and also to find a response that how much consumers' are willing to pay more for eco-friendly products. The result from this illustrates that whether the price and quality will affect their buying decision.

Kirsten Umberson, B. S.(2008)states that this research gives insight into environmental attitudes, pressures to purchase environmentally friendly apparel, factors that inhibit Environmentally friendly apparel purchasing, awareness of environmentally friendly apparel purchase options, and marketing insight into the eco-friendly consumer. The theory of planned behavior (TPB) was used to assess consumer purchasing intentions for environmentally friendly apparel. The TPB consists of a three-pronged measurement: individual attitudes, subjective norms, and perceived behavioral control. Individual attitudes were gauged on three dimensions

which included environmental attitudes, demographic patterns, and environmentally friendlyapparel purchase intentions.

Aabha Anoop, The Hindu news paper, (2011) in their article about eco-friendly bags say that, to start with, plastic carry-bags are the biggest pollutants and the alternative is to use cloth or paper bags. They are costlier, but are more durable than thin carry-bags often available in the market. Even the thicker bags provided by textile and other merchant outlets can be replaced by much more durable and eco-friendly cloth bags. A purse-bag promoted by the Narikkuni-based Minnas Paper and Cloth Products is a blessing to shoppers who hate to carry home loads of plastic waste from the market. The purse-bag is a compact product serving as a purse, but on opening the zipper on the side, it becomes a big carry-bag. Plastic cups and plates form another big chunk of waste. Consumers should be delighted to know that these can be easily replaced by paper products. Areca-leaf plates and cups will be a big draw if popularised. A number of Kudumbasree units in the district have ventured into manufacture of areca-leaf products, which are cheap and durable.

Bamboo, wood and coconut shells can be used to make a large range of products which are now made of plastic. Uravu from Thrikkaipatta in Wayanad has dusted out age-old lamp shades, ladles, pen stands, candle stands, jute carry-bags, flower vases, dustbins and many other products made of bamboo or wood. Cotton and jute have been used to make file folders, school, office and vanity bags, purses, mobile-phone pouches and many such articles. Even ornaments such as necklaces, earrings, bangles, hair clips and pens can be made out of these. Mud utensils make a viable alternative for many other plastic products and are popular in many parts of India.

Chris Blank, in his study about environmental problems with plastic, he say that plastic is a versatile and potentially indestructible material, which makes it ideal for a number of commercial and household uses. Indeed, plastic has become a substitute for many items which used to be made from other substances, such as plastic bottles for condiments such a ketch up. In many cases, this is extremely useful and convenient. However, plastic has a many environmental downsides, beginning with the production of plastic and extending to its disposal.

Richard C Thompson, Charles J Moore, Frederick S Vom Saal and Shanna H Swan (2009) states that plastics have transformed everyday life; usage is increasing and annual production is

likely to exceed 300 million tonnes by 2010. In this concluding paper to the Theme Issue on Plastics, the Environment and Human Health, we synthesize current understanding of the benefits and concerns surrounding the use of plastics and look to future priorities, challenges and opportunities. It is evident that plastics bring many societal benefits and offer future technological and medical advances. However, concerns about usage and disposal are diverse and include accumulation of waste in landfills and in natural habitats, physical problems for wildlife resulting from ingestion or entanglement in plastic, the leaching of chemicals from plastic products and the potential for plastics to transfer chemicals to wildlife and humans. However, perhaps the most important overriding concern, which is implicit throughout this volume, is that our current usage is not sustainable. Around 4 per cent of world oil production is used as a feedstock to make plastics and a similar amount is used as energy in the process. Yet over a third of current production is used to make items of packaging, which are then rapidly discarded. Given our declining reserves of fossil fuels, and finite capacity for disposal of waste to landfill, this linear use of hydrocarbons, via packaging and other short-lived applications of plastic, is simply not sustainable. There are solutions, including material reduction, design for end-of-life recyclability, increased recycling capacity, development of bio-based feedstocks, strategies to reduce littering, the application of green chemistry life-cycle analyses and revised risk assessment approaches. Such measures will be most effective through the combined actions of the public, industry, scientists and policymakers. There is some urgency, as the quantity of plastics produced in the first 10 years of the current century is likely to approach the quantity produced in the entire century that proceeded.

Ficha De Actor (2007) states in the article 'Uravu; a new initiative base on bamboo' that, bamboo based development initiative is taken to counter ecological crisis and economic backwardness of the marginalised groups. This file presents a success story of a new initiative based on bamboo, Uravu, which has been in the forefront of field based research, lobbying for policy implementation, product experiments etc., for the past one decade aiming at propagating the values of sustainable development as the sole solution to ecological crisis and economic backwardness. A sustainable development initiative based on bamboo, Uravu, is making unique success stories in Kerala on areas like enhancing the natural resource base, upgrading local

resource processing skills, introducing appropriate technologies, producing value-added products from local resources and marketing environment-friendly products and goods in various markets.

Beth Terry (2013) in the Mother Earth News reported that the "Plastic Free" is a practical guide to educate everyone on the presence of plastic and its harmful effects on the environment. Learn how to rid your life of plastic with pertinent knowledge, realistic application and a commitment to encourage others to limit — or even eliminate —their plastic intake.

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SIGNIFICANCE OF THE STUDY

The environment is not only for the present generation but also for the future generations. For the protection of our environment we must start to be eco-friendly. 'Bamboo', the 'green gold' provides local solution to several global challenges. It provides ecological security by conservation of forest through timber substation, as an efficient carbon sink and as an alternative for non-biodegradable and high energy embodied materials such as plastic and metals. 'Uravu' started a new initiative based on bamboo to counter ecological crisis and economic backwardness of the marginalized groups. So it becomes important to study about how Uravu helps in protecting our environment and how they promote eco-friendly products.

OBJECTIVES OF THE STUDY

- 1. To study the importance of promoting eco-friendly products.
- 2. To analyses the opinion of customers towards the eco-friendly products.
- 3. To study about the role of 'Uravu' in promoting eco-friendly products.
- 4. To provide adequate awareness among public about eco-friendly products as an alternative for plastic products.

RESEARCH METHODOLOGY

The study is designed as descriptive and empirical one. It is descriptive because it describes the state of affairs as it is and it in empirical one because it collect first hand information with a structured questionnaire from the respondents. The primary data is collected directly from the respondents by using questionnaire and secondary data is collected from online resources.

SOURCES OF PRIMARY DATA

The main source of data used for this study is primary source and the primary data is collected from various persons visited Uravu of Wayanad district of Kerala.

SOURCES OF SECONDARY DATA

The secondary data for the study was mainly collected from the website of Uravu. The journals, magazines, internet and other published data related to Uravu is also used for the study as secondary source.

SAMPLE DESIGN

The present study is focused on the persons visited Uravu of Wayanad district. The total number of respondents selected for the study is 200 and they are selected by using random sample method.

TOOLS OF DATA ANALYSIS

For the analysis of primary data percentage analysis method is used. The analyzed data are presented with the help of tables and diagrams.

CHAPTER-2

THEORETICAL BACKGROUND

ABOUT THE ORGANIZATION

"Uravu "is a non- profit trust established in 1996, registered under the Indian Trust Act (Reg.No.122/96:) and its head quarters is at Thrikkipetta, Wayanad, Kerala. Uravu implements integrated, end to end programs in bamboo sector. 'Bamboo' 'the green gold' provides local solutions to several global challenges it provides ecological security by conservation of forest through timber substitution as an efficient carbon sink and as alternative to non-biodegradable and high energy embodied material such as plastics and metals. 'Uravu' is a non-government and business organization to implement programs for employment and income generation in rural areas. 'Uravu' strives for empowering the marginalized and economically advantaged social group especially the traditional artisan's women and indigenous people. 'Uravu' is located in Trikkaipetta village in Wayanad district.

Uravu makes use of the Indigenous Science and Technology for the upliftment of the tribes in the area and it runs a successful bamboo crafts design and production centre along with a bamboo nursery. Establishing sustainable rural micro enterprises based on the processing and value addition of local, natural resources is the major challenge taken up by Uravu. Uravu works mainly with bamboo and they conduct design development and product diversification programs for artisans and run common facilities centre for bamboo processing.

Uravu Eco Links Ltd: the public limited company promoted by Uravu trust members, assists producers groups in marketing their products in various markets. Uravu runs a bamboo nursery, supplies planting materials of varied bamboo species to local and conduct bamboo planting programs.

VISION

Access and control over natural resources is the key to the well being of rural communities and indigenous people. Uravu has a vision to re-establish bamboo handicraft as a sustainable source of employment and income for the rural people. Uravu will establish a neche market for bamboo products at both domestic and international levels. The producer groups will be equipped to

become competitive and self-reliant through improvements in technology, skills and human resources.

OBJECTIVES OF URAVU

Bamboo is found abundantly in wayand and Uravu encourages the traditional technology and craftsmanship of the tribes in creating a whole range of products using bamboo. They include both functional and decorative products. The institute also helps in marketing these products through their sales outlets. In its efforts to uplift the locals using the locally available material, it provides more job opportunities to the local craftsmanship.

The role of "Uravu" in promoting eco-friendly product is very important. Bamboo is the important raw material used by Uravu for producing eco-friendly products.

RAW MATERIALS

The raw materials for the production are collected from the following sources.

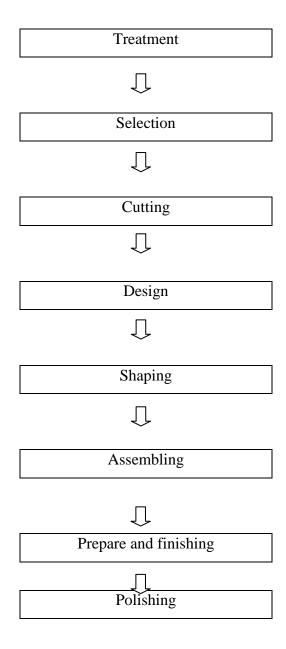
- Bamboo nursery
- Local suppliers
- Kerala state bamboo corporation
- Direct cutting rights from forest

BAMBOO NURSERY: Bamboo products are made with different species of bamboos and reed bamboos selectively harvested from homestead farms and public commons. The giant bamboo grown on certain plantations in Wayanad is a special raw materials used in making a number of products. Different species of bamboos known locally as Kallan, Illi, Bilathi, Pennoda, Oda, are also used by the artisans in the cluster.

LOCAL SUPPLIERS: In case of local suppliers the raw materials are usually bought to the Uravu site at Thrikkaipetta with their own conveyance and the organization is only involved in buying products at a price agreed over by both parties. The quality check and other associated activities are done right at the site itself. KERALA STATE BAMBOO CORPORATION: In the case of material produced from KSBC, the company has to take the complete responsibility in sending their employee over to the auction site, making sure of the quality requirements is met and transfers the product to the organization with their own transportation means.

PRODUCTION PROCEDURE

The production procedure of Uravu mainly depends up on the nature of the products to be produced. The following is the production procedure.



PRODUCTS OF URAVU

- 1. Bamboo trays
- 2. Bamboo pen
- 3. Bamboo bags
- 4. Boat (URU)
- 5. Bamboo blinds
- 6. Kerala boat (THONI)
- 7. Bamboo flute
- 8. Wall hangings
- 9. Bamboo masks
- 10. Bamboo jewelers
- 11. Dry flower
- 12. Lamps and shades
- 13. File folders
- 14. Bamboo craft products

BAMBOO TRAYS

This is also a product manufactured by one of the self help groups located in Kerala in Thrikkaipetta village. This group also helps rural people to earn their livelihood. These trays are produced using a different species of bamboo. These bamboos are procured from the farms located in village district. They offer these trays in various shapes and sizes and can be comfortably used as coffee trays, office file trays etc.

BAMBOO PEN

Elegant pens are handmade and are produced by micro enterprises in Wayanad district, Kerala state. These pens are made by using reed bamboo and coconut shelves. Bamboo helps in conserving streams and is environment friendly. The maximum utilization will help the rural people in earning their bread.

BAMBOO BAGS

Bamboo bags are manufactured by self help group promoted by Uravu. This group also provides employment to the rural class and majority to the women and members of indigenous people. These beautiful jute and bamboo bags are produced using top class quality jute. These bags are available in a variety of colors and sizes and can be easily use for conferences, seminars and it also serves as a good gift item.

BOAT (URU)

Uravu presents exclusively designed Boat (Uru), which is a perfect amalgamation of natural beauty and impeccable craftsmanship. This traditional model of boat is hand-crafted from high quality wood and then the hull is painted to provide real look to the boat. This elegant and beautiful handicraft is used as a perfect gift item on various occasions.

BAMBOO BLINDS

The bamboo blinds are a one among the range of blinds manufactured by Mahatma bamboo curtains. This organization is a self help group. This group provides employment to the rural people and principally to women and also to members of indigenous people. These blinds are manufactured using reed bamboo procured from non forest area. These blinds are made by traditional weavers manually.

KERALA BOAT (THONI)

The Thoni (Boat) is traditionally related to the culture of Kerala, where it is used at Onam festival for boat racing. These handicrafts are minutely crafted and printed by expert artisans, showing traditional customs, rituals and elegance.

DRY FLOWERS

The women in the unit themselves collect bamboo flowers from forest. Apart from bamboo flowers they use the dry leaves, arecanut palm, silill etc. This unit is working as self help group and having 10 members and they give job opportunity to other 10 members of nearby area. The women in the unit themselves collects bamboo flower from the forest, sometimes they seeking help from men and give wage for their work.

BAMBOO CRAFT WORKS

About 12 groups engaged in production of modern bamboo craft items. Majority artisans are women. They have got trained in the production of selected items with the financial assistance of various government programs. There are about 240 artisans out of which 60% work regularly. Uravu has become an important segment in the growth of handicraft industry.

The Uravu is also producing various other products such as lamp shades, Kerala Boat(thoni), bamboo flute, wall hangings, bamboo masks, bamboo jewelers, bamboo dry food items, dry shoot pickles etc. Bamboo holds the potential for significantly altering and greening the course and content of national and global development. From its inception, the activities of Uravu were interventions aimed at improving the lives of downtrodden social groups, the traditional rural artisans and indigenous people, especially the women among them in the hilly district of Wayanad.

The production processes of uravu consist of selection of the piece of bamboo for making particular products. Cutting, design, preparation, shaping, assembling, finishing and polishing are the various process made by Uravu for producing eco-friendly products. Uravu is playing very important role in promoting eco-friendly products in wayanad. The study helps to get awareness about eco-friendly products and its importance. It helps to protect our environment from the harmful effects of plastics, chemicals and non-biodegradable items. The eco-friendly products not only have great potential for growth in production and export but can also let to wide spread generation of employment opportunities in the rural areas of the country.

CHAPTER-3

RESPONDENTS PROFILE

In this chapter the profile of the respondents is given. Respondents are classified on the basis of their gender, age, educational qualification and employment status.

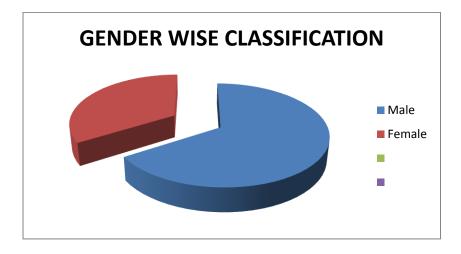
GENDER WISE CLASSIFICATION

Table No: 3.1

Gender	Number	Percentage
Male	132	66
Female	68	34
Total	200	100

(Source: Primary Data)

Figure No: 3.1



From the table and diagram 3.1, it can be find out that 66% of the respondents are male and 34% of the respondents are female.

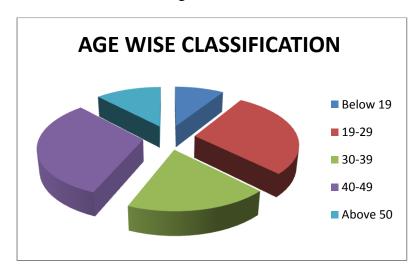
AGE WISE CLASSIFICATION

Table No: 3.2

Age	Respondents	Percentage
Below 19	34	17
19-29	52	26
30-39	34	17
40-49	58	29
Above 50	22	11
Total	200	100

(Source: Primary Data)

Figure No: 3.2



From the table and diagram 3.2, 17% of the respondents are of age group below 19, 26% are between 19 and 29, 17% are between 30 and 39, 29% are between 40 and 49 and 11% of the respondents are of the age above 50.

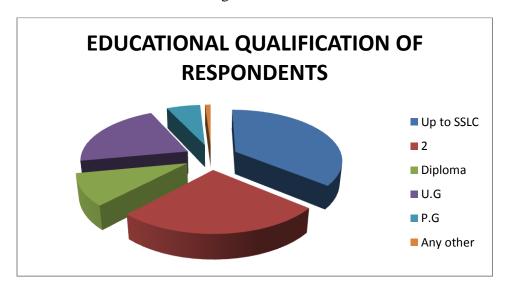
EDUCATIONAL QUALIFICATION OF RESPONDENTS

Table No: 3.3

Education	Respondents	Percentage
Up to SSLC	72	36
+2	52	26
Diploma	20	10
U.G	42	21
P.G	12	6
Any other	2	1
Total	200	100

(Source: Primary Data)

Figure No: 3.3



The above table and diagram 3.3, reveals that 36% of the respondents are qualified only up to SSLC. 26% of the respondents are qualified with +2, 10% are qualified with diploma, 21% are qualified with under graduation 6% of the respondent had post graduation and 2% of the respondents have some other qualifications.

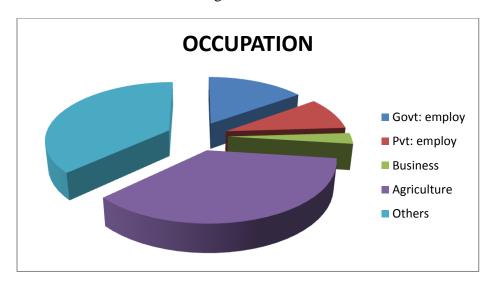
OCCUPATION

Table No: 3.4

Occupation	Respondents	Percentage
Govt: employee	30	15
Pvt: employee	18	9
Business	6	3
Agriculture	72	36
Others	74	37
Total	200	100

(Source: Primary Data)

Figure No: 3.4



The above table and diagram 3.4, reveals that among the total number of respondents 36% of the respondents are agriculturist, 15% of them are working at Government sectors, 9% of them are working at Private sectors, 3% of them are doing business and 37% of the respondents belong to some other occupation.

CHAPTER-4

DATA ANALYSIS AND INTERPRETATION

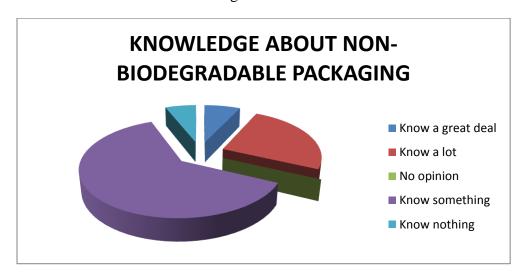
KNOWLEDGE ABOUT NON-BIODEGRADABLE PACKAGING

Table No: 4.1

Opinion	Respondents	Percentage
Know a great deal	14	7
Know a lot	50	25
No opinion	0	0
Know something	124	62
Know nothing	12	6
Total	200	100

(Source: Primary Data)

Figure No: 4.1



From the table 4.1, 62% of the respondents only know something about the non-biodegradable packaging, 25% know a lot about this, 7% know a great deal about non-biodegradable packaging and 6% know nothing about non-biodegradable packaging.

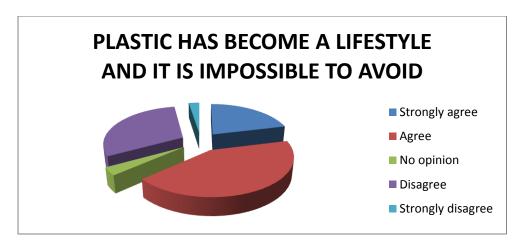
PLASTIC HAS BECOME A LIFESTYLE AND IT IS IMPOSSIBLE TO AVOID

Table No: 4.2

Opinion	Respondents	Percentage
Strongly agree	50	25
Agree	100	50
No opinion	8	4
Disagree	36	18
Strongly disagree	6	3
Total	200	100

(Source: Primary Data)

Figure No: 4.2



From the above table and diagram 4.2, 50% of the respondents agree that plastic has become a lifestyle and it is impossible to avoid. 25% strongly agree the statement, 18% of the respondents disagree that the plastic has become a life style and it is impossible to avoid and 3% strongly disagree with this.

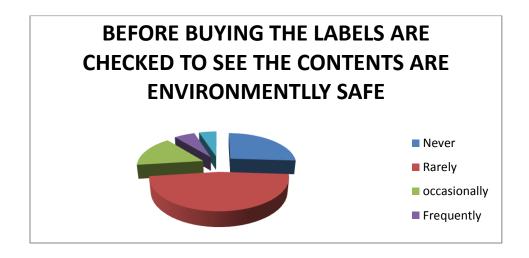
BEFORE BUYING THE LABELS ARE CHECKED TO SEE THE CONTENTS ARE ENVIRONMENTALLY SAFE

Table No: 4.3

Opinion	Respondents	Percentage
Never	52	26
Rarely	94	47
Occasionally	32	16
Frequently	12	6
Always	10	5
Total	200	100

(Source: Primary Data)

Figure No: 4.3



The above table and figure 4.3, reveals that, before buying, 47% of the respondents rarely check the labels to see that the contents are environmentally safe, 16% of the respondents check only occasionally. 26% never check and 5% always check the labels.

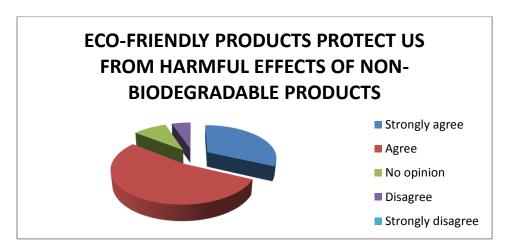
ECO-FRIENDLY PRODUCTS PROTECT US FROM HARMFUL EFFECTS OF NON-BIODEGRADABLE PRODUCTS

Table No: 4.4

Opinion	Respondents	Percentage
Strongly agree	62	31
Agree	104	52
No opinion	18	9
Disagree	10	5
Strongly disagree	6	3
Total	200	100

(Source: Primary Data)

Figure No: 4.4



From the above table and figure 4.4, 52% of the respondents agree that eco-friendly products protect us from harmful effects of non-biodegradable products. 31% strongly agree, and 3% strongly disagree with the statement.

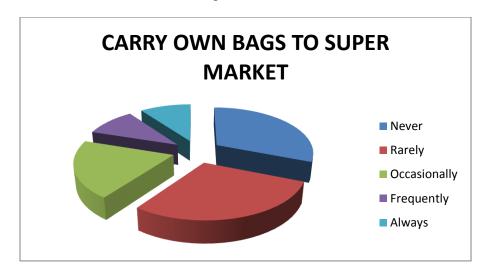
CARRY OWN BAGS TO SUPER MARKET

Table No: 4.5

Opinion	Respondents	Percentage
Never	62	31
Rarely	58	29
Occasionally	40	20
Frequently	20	10
Always	20	10
Total	200	100

(Source: Primary Data)

Figure No: 4.5



The above table and figure 4.5, reveals that 10% of the respondents always carry own bags to super market. 20% of the respondents carry own bags in some occasions, 10% frequently carry own bags, 31% of the respondents never carry and 29% rarely carry own bags to super market.

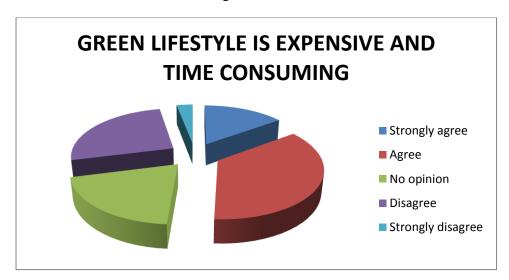
GREEN LIFESTYLE IS EXPENSIVE AND TIME CONSUMING

Table No: 4.6

Opinion	Respondents	Percentage
Strongly agree	30	15
Agree	72	36
No opinion	40	20
Disagree	52	26
Strongly disagree	6	3
Total	200	100

(Source: Primary Data)

Figure No: 4.6



From the above table and diagram 4.6, it can be find out that 36% of the respondents agree that green lifestyle is expensive and time consuming.15% strongly agree and 26% disagree with the statement.

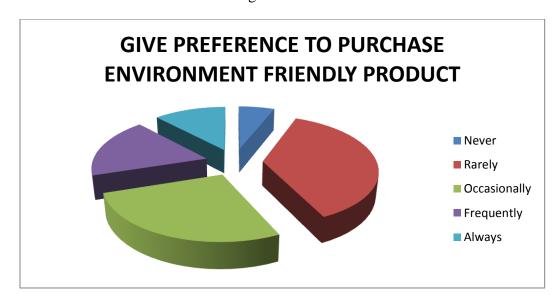
GIVE PREFERENCE TO PURCHASE ENVIRONMENT FRIENDLY PRODUCT

Table No: 4.7

Opinion	Respondents	Percentage
Never	12	6
Rarely	74	37
Occasionally	54	27
Frequently	36	18
Always	24	12
Total	200	100

(Source: Primary Data)

Figure No: 4.7



The above table and figure 4.7, reveals that 18% of the respondents frequently prefer to purchase environment friendly product and 12% always prefer to purchase this. 27% of the respondent prefers it occasionally, 37% prefers rarely and 6% never give preference to environment friendly products while purchasing.

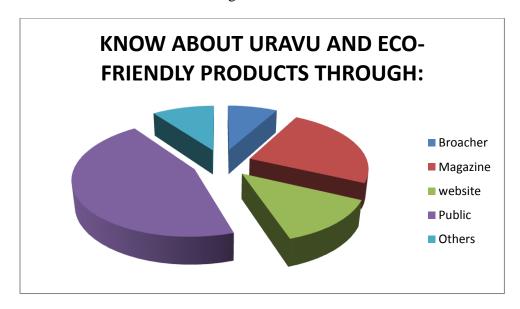
KNOW ABOUT 'URAVU' AND ECO-FRIENDLY PRODUCTS THROUGH:

Table No: 4.8

Medias	Respondents	Percentage
Broacher	16	8
Magazine	48	24
Website	26	13
Public	90	45
Others	20	10
Total	200	100

(Source: Primary Data)

Figure No: 4.8



From the table and figure 4.8, it can be find out that 45% of the respondent came to know about 'URAVU' and its eco-friendly product through public. 24% through magazine, 13% through website, and 8% came to know through broacher.

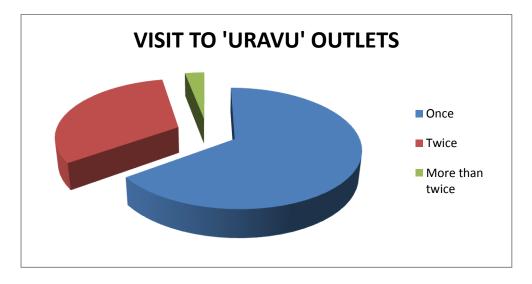
VISIT TO 'URAVU' OUTLETS

Table No: 4.9

Opinion	Respondents	Percentage
Once	130	65
Twice	64	32
More than twice	6	3
Total	200	100

(Source: Primary Data)

Figure No: 4.9



From the table No: 4.9, it can be understood that 65% of the respondents visited the 'URAVU' outlets only once. 32% visited the outlet twice and 3% of the respondents visited the Uravu outlets more than two times.

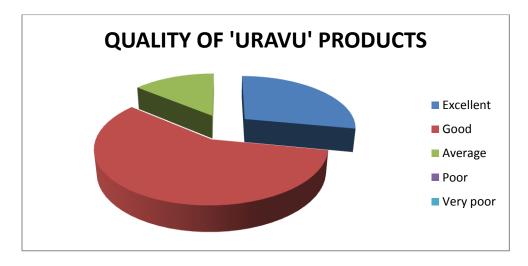
QUALITY OF 'URAVU' PRODUCTS

Table No: 4.10

Opinion	Respondents	Percentage
Excellent	56	28
Good	116	58
Average	28	14
Poor	0	0
Very poor	0	0
Total	200	100

(Source: Primary Data)

Figure No: 4.10



It can be noticed from the above table and figure 4.10, that, 58% of the respondents say that the quality of Uravu product is good. 28% says that the quality of the Uravu products are excellent, 14% says that the quality is only up to an average no one respondent say that the quality of Uravu product is poor.

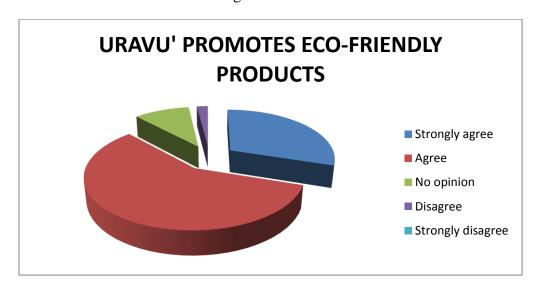
'URAVU'PROMOTES ECO-FRIENDLY PRODUCTS

Table No: 4.11

Opinion	Respondents	Percentage
Strongly agree	60	30
Agree	116	58
No opinion	20	10
Disagree	4	2
Strongly disagree	0	0
Total	200	100

(Source: Primary Data)

Figure No: 4.11



The above table and figure 4.11, reveals that 58% of the respondents agree that Uravu promotes eco-friendly products and 30% of the respondents strongly agree. Only 2% of the respondents disagree that Uravu promotes eco-friendly products.

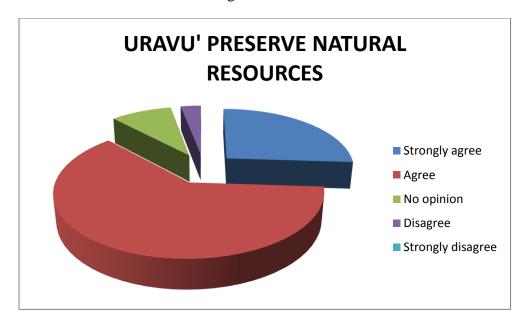
'URAVU'PRESERVE NATURAL RESOURCES

Table No: 4.12

Opinion	Respondents	Percentage
Strongly agree	52	26
Agree	124	62
No opinion	18	9
Disagree	6	3
Strongly disagree	0	0
Total	200	100

(Source: Primary Data)

Figure No: 4.12



It can be noticed from the above table and figure 4.12, that 62% of the respondents agree that Uravu preserve natural resources. 26% of the respondents strongly agree, 9% of the respondents have no opinion and 3% disagree with this statement.

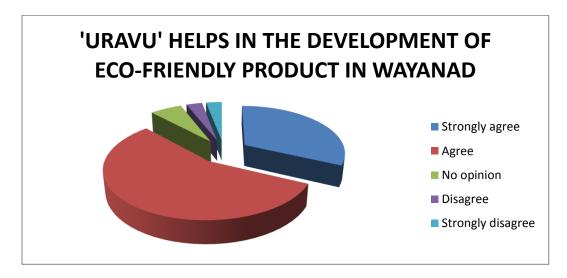
'URAVU' HELPS IN THE DEVELOPMENT OF ECO-FRIENDLY PRODUCT IN WAYANAD

Table No: 4.13

Opinion	Respondents	Percentage
Strongly agree	64	32
Agree	112	56
No opinion	12	6
Disagree	6	3
Strongly disagree	6	3
Total	200	100

(Source: Primary Data)

Figure No: 4.13



From the table and figure 4.13, we can see that 56% of the respondents agree that Uravu helps in the development of eco-friendly product in wayanad. 32% of the respondents strongly agree, 3% of the respondents disagree and 3% strongly disagree with the statement.

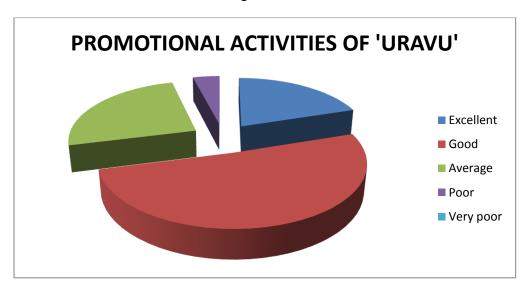
PROMOTIONAL ACTIVITIES OF 'URAVU'

Table No: 4.14

Opinion	Respondents	Percentage	
Excellent	40	20	
Good	102	51	
Average	50	25	
Poor	8	4	
Very poor	0	0	
Total	200	100	

(Source: Primary Data)

Figure-4.14



The above table and graph 4.14, reveals that 51% of the respondent says that the promotional activities of Uravu are good. 20% of the respondent marked it as excellent, 25% of the respondents says as average and only 4% of the respondents says that the promotional activities of Uravu is poor.

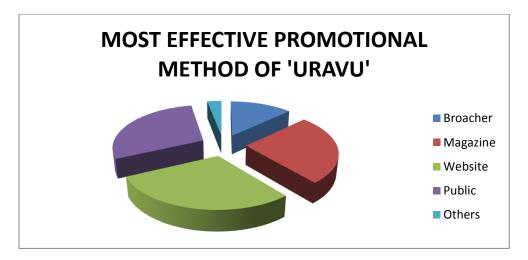
MOST EFFECTIVE PROMOTIONAL METHOD OF 'URAVU'

Table No: 4.15

Medias	Respondents	Percentage	
Broacher	26	13	
Magazine	52	26	
Website	58	29	
Public	58	29	
Others	6	3	
Total	200	100	

(Source: Primary Data)

Figure No: 4.15



The table and diagram 4.15 reveals that 29% of the respondents support website as the most effective promotional method of Uravu. Another 29% of the respondents say that public is effective, 26% of the respondents supported magazine and 13% of the respondents says that broacher is the effective promotional method of Uravu.

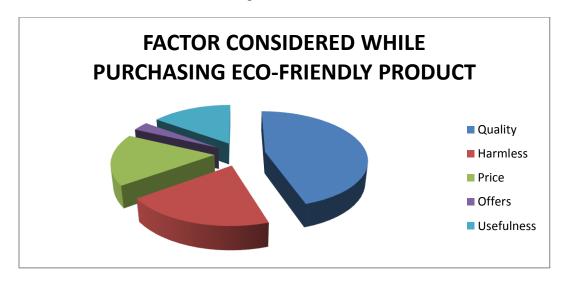
FACTOR CONSIDERED WHILE PURCHASING ECO-FRIENDLY PRODUCT

Table No: 4.16

Opinion	Respondents	Percentage
Quality	90	45
Harmless	40	20
Price	34	17
Offers	6	3
Usefulness	30	15
Total	200	100

(Source: Primary Data)

Figure No: 4.16



The table and diagram 4.16, reveals that 45% of the respondents purchase the eco-friendly product because of its quality. 20% of the respondents purchase because of its harmlessness. 17% of the respondents purchase due to its reasonable price and 15% of the respondents purchase eco-friendly product because of its usefulness.

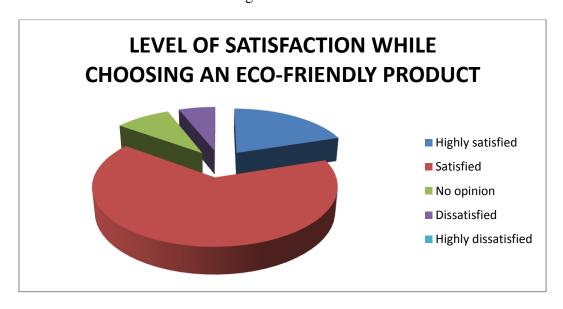
LEVEL OF SATISFACTION WHILE CHOOSING AN ECO-FRIENDLY PRODUCT

Table No: 4.17

Opinion	Respondents	Percentage
Highly satisfied	40	20
Satisfied	130	65
No opinion	18	9
Dissatisfied	12	6
Highly dissatisfied	0	0
Total	200	100

(Source: Primary Data)

Figure No: 4.17



From the table and diagram 4.17, it can be find out that 65% of the respondents are satisfied while choosing an eco-friendly product and 20% of them are highly satisfied. 6% of the respondents are dissatisfied while choosing an eco-friendly product. There is no respondents who are highly dissatisfied while purchasing an eco-friendly product.

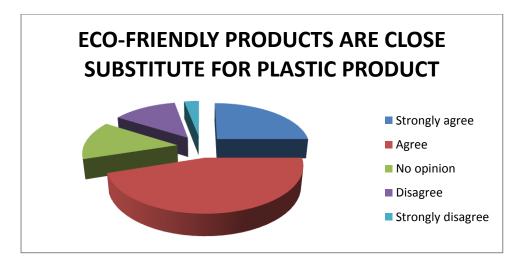
ECO-FRIENDLY PRODUCTS ARE CLOSE SUBSTITUTE FOR PLASTIC PRODUCT

Table No: 4.18

Opinion	Respondents	Percentage
Strongly agree	50	25
Agree	90	45
No opinion	28	14
Disagree	26	13
Strongly disagree	6	3
Total	200	100

(Source: Primary Data)

Figure No: 4.18



The table and diagram 4.18, reveals that 45% of the respondents agree and 25% strongly agree that the eco-friendly products are close substitute for plastic product. 14% of the respondents have no opinion about this and 13% of the respondents disagree that eco-friendly products are close substitute for plastic products.

WE CAN IMPROVE OUR ENVIRONMENT BY PUCHASING ECO-FRIENDLY PRODUCT

Table No: 4.19

Opinion	Respondents	Percentage
Strongly agree	52	26
Agree	114	57
No opinion	8	4
Disagree	14	7
Strongly disagree	12	6
Total	200	100

(Source: Primary Data)

Figure No: 4.19



From the above table and diagram 4.19, it can be find out that 57% of the respondents agree and 26% strongly agree that we can improve our environment by purchasing eco-friendly product. 7% of the respondents disagree and 6% of the respondents strongly disagree that we can improve our environment by purchasing eco-friendly products.

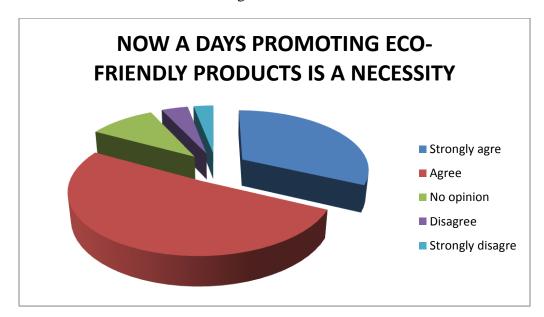
NOW A DAYS PROMOTING ECO-FRIENDLY PRODUCTS IS A NECESSITY

Table No: 4.20

Opinion	Respondents	Percentage
Strongly agree	64	32
Agree	102	51
No opinion	20	10
Disagree	8	4
Strongly disagree	6	3
Total	200	100

(Source: Primary Data)

Figure No: 4.20



From the above table and diagram 4.20, it can be find out that 51% of the respondents says that promoting eco-friendly product is a necessity. 32% of the respondents strongly agree and 4% of the respondents disagree with the statement.

WHILE PURCHASING, PREFERENCE WILL BE GIVEN TO PRODUCTS WITH LEAST AMOUNT OF POLLUTION

Table No: 4.21

Opinion	Respondents	Percentage
Strongly agree	64	32
Agree	106	53
No opinion	16	8
Disagree	6	3
Strongly disagree	8	4
Total	200	100

(Source: Primary Data)

Figure No: 4.21



The table and diagram 4.21, reveals that 53% of the respondents agree that they will give preference to products with least amount of pollution while purchasing. 32% strongly agree, and 8% have no opinion about this. 3% of the respondents disagree and 4% strongly disagree with the statement.

FINDINGS, SUGGESTIONS AND CONCLUSION

FINDINGS

- Majority of the respondents have only little knowledge about non-biodegradable packaging.
- Most of the respondents agree that plastic has become a life style and it is impossible to avoid.
- ❖ Before buying a product most of the respondents are not checking the labels to see that whether the contents are environmentally safe.
- ❖ A high percentage of the respondents agree that eco-friendly products protect us from harmful effects of non-biodegradable products.
- ❖ Majority of the respondents are not carrying own bags to super markets.
- Majority of the respondents are not always preferred to purchase environment friendly products.
- ❖ Majority of the respondents came to know about 'Uravu' and its eco-friendly products through public, magazine and website.
- ❖ Majority of the respondents visited Uravu outlets only once.
- ❖ A higher percentage of the respondents say that quality of Uravu products is good.
- ❖ Majority of the respondents agree that 'Uravu' promotes eco-friendly products.
- ❖ Majority of the respondents agree that Uravu preserves natural resources.
- ❖ Uravu helps in the development of eco-friendly product in Wayanad.
- * Majority of the respondents agree that promotional activities of Uravu are good.
- ❖ Most of the respondents say that the most effective promotional method of Uravu is public and website.
- Majority of the respondents consider quality of the products while purchasing ecofriendly products.
- ❖ Most of the respondents are satisfied while purchasing an eco-friendly product.

- ❖ Eco-friendly products are close substitute for plastic product and we can improve our environment by purchasing eco-friendly products.
- Majority of the respondents agree that now a day's promoting eco-friendly products is a necessity.
- ❖ Most of the respondents says that while purchasing they will give preference to the products with least amount of pollution.

SUGGESTION

- Initiatives are to be taken by Uravu to make the public know about non-biodegradable packaging and its demerits.
- Ensure that our public has an idea about eco-friendly products and its advantages.
- Initiatives are to be taken to inform the public about the harmful effects of using plastic.
- Uravu can promote the public to purchase the products which are of least pollution.
- Uravu can create a sense in the mind of public that, purchasing and promoting ecofriendly product is a necessity.

CONCLUTION

Promoting eco-friendly products is very important now days, because the plastic products are creating so many problems in the environment. Most of the customers are aware about eco-friendly products and its advantages. So they prefer to purchase eco-friendly products when it is available as an alternative for plastic product. 'Uravu' plays an important role in promoting eco-friendly. Being eco-friendly we can protect our environment from the harmful effects of plastics and can have a nice life. The necessity of being eco-friendly is very important as this environment is not only for us but for so many future generations.

The bamboo "the green gold" provides local solutions to several global challenges. The bamboo Products achieved a great stand in the modern society due to its eco-friendly nature and more over it provides a nature of beauty to the products. Thus the bamboo products in the coming years will surely get a wide market among consumers. The eco-friendly products not only have great potential for growth in production and export but can also lead to wide spread generation of employment opportunities in the rural areas of the country.

The experience in Uravu was very valuable and interesting. The objectives are to provide maximum employment and sell out quality product at reasonable price to the consumers. Uravu gives the opportunities to artisans, members of the backward society, especially women to make money by using their traditional skill and knowledge and to improve their standard of living.

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- > www.bamboocluster.org
- Company records and articles
- > Company profile

ECO-FRIENDLY PRODUCTS AND ENVIRONMENT: ROLE OF "URAVU"

IN WAYANAD DISTRICT OF KERALA.

QUESTIONNAIRE

Part - A

INSTRUCTIONS: Kindly tick the appropriate one. Answer all the statements.

Name : _____

1.

2.	Age in years a)Below19 b)19-29 c)30-39 d)40-	-49 e)50 and	above
3.	Gender – Male /Female	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	is the same	
4.	Household income/month (in a)Under 15000 b)15000-	*	00-50000	
5.	Education: a)SSLC b)Higher Sec e)Post Graduate f)Any other,	•	c)Diploma	d)Graduate
6.	Marital Status: a)Married b)Unmarried			
7.	Occupation:			
	a)Government Employee d)Agriculture e)Business	b)Private Empl f)Others (speci	•	essional
		Part – B		
1.	1. Do you have knowledge about the non-Biodegradable packaging.			g.
	a)Know a Great deal	b) Know a lo	ot c) No opini	on
	d)Know something	e) Know no	othing	
2.	Do you think that plastic has	become a lifestyl	le and it is imposs	ible to avoid.
	a) StronglyAgree b)Agree	c)No Opinior	d)Disagree	e)Strongly Disagree
3.	Do you read the labels before	buying, to see if	the contents are e	environmentally safe.
	a)Neverb)Rarely c) Oo	ecassionally	d) Frequently	e)Always
4.	Purchasing and using of eco-f	Friendly product	protect us from ha	rmful effects of non-
	biodegradable products.			
	a)StronglyAgree b)Agree	c)No Opinior	d)Disagree	e)Strongly Disagree
5.	Do you carry own bags to sup	ermarkets.		
	a)Neverb)Rarely c) Oc	ecassionally	d) Frequently	e)Always
6.	Green lifestyle is expensive a	nd time consumi	ng.	
	a)StronglyAgree b)Agree	c)No Opinior	d)Disagree	e)Strongly Disagre

7.	Do you prefer to purchase environmentally friendly product.
	a)Neverb)Rarely c) Occassionally d) Frequently e)Always
8.	How do you came to know about uravu and its eco-friendly product.
	a)Broacher b)Magazine c)Website d)Public e)Others.
9.	Whether you had visited uravu outlets.
	a) Once b) Twice c) More than twice
10.	What is your opinion about the quality of uravu products.
	a)Excellent b)Good c)Average d) poor e) Very Poor
11.	Uravu provides more possibilities in promoting eco friendly products.
	a)StronglyAgree b)Agree c)No Opinion d)Disagree e)Strongly Disagre
12.	Uravu can help to preserve natural resourses.
	a)StronglyAgree b)Agree c)No Opinion d)Disagree e)Strongly Disagre
13.	Uravu helps in the development of eco-friendly product in Wayanad.
	a)StronglyAgree b)Agree c)No Opinion d)Disagree e)Strongly Disagre
14.	How do you rate the promotional activities of uravu.
	a)Excellent b)Good c)Average d) poor e) Very Poor
15.	Which of the promotional methods used by uravu is the most effective one.
	a)Broacher b)Magazine c)Website d)Public e)Others.
16.	While purchasing an eco-friendly product which factor will you consider mostly.
	a)Quality b)Harmless c)Price d)Offers e)Usefulness
17.	What is your level of satisfaction while choosing an eco-friendly product.
	a)Highly satisfied b)Satisfied c)No Opinion d)Dissatisfied e)Highly Dissatisfied
18.	Do you think that eco-friendly products are close substitute for plastic products.
	a)StronglyAgree b)Agree c)No Opinion d)Disagree e)Strongly Disagre
19.	Do you agree that by purchasing eco-friendly products you can improve your environment
	a)StronglyAgree b)Agree c)No Opinion d)Disagree e)Strongly Disagre
20.	Do you feel that promoting eco-friendly products is a necessity now a days.
	a)StronglyAgree b)Agree c)No Opinion d)Disagree e)Strongly Disagre
21.	When there is a choice I always prefer a product which contributes to the least amount of
	pollution.
	a)StronglyAgree b)Agree c)No Opinion d)Disagree e)Strongly Disagre

7.