CHAPTER-VII
SUMMARY OF FINDINGS AND CONCLUSIONS

Introduction to Problem

There is a growing concern for environmental degradation and the resultant pollution all over the world. The United Nation declared 2005-2014 as the decade for education for sustainable development and environmental management. Environmental protection is not an optional extra but it is an essential part of the complex process of doing business today for many business corporates. Right from 1992, Rio de Janerio Earth Sumit conference world leaders and top environmental officials have been expressing global concern over environmental issues.

The environment is undergoing a sea change in the last 50 years. The scientific evidence suggests that the earth’s climate is changing. The atmosphere is warming up at great pace and this trend will continue. Further, scientists bring to our attention that threats to earth’s ozone layer, accumulation of greenhouse gases, deserts eating agricultural land, disappearances of rain forests, and depletion of vital resources have a bearing on our very survival.

The widespread environmental problems in India are choking air pollution, water pollution in the vast majority of rivers, water shortages throughout the country, ocean pollution, mountains of solid and toxic waste, acid deposition spoiling land and water, destruction of the remaining scattered habitats, near-total deforestation, rampant over fishing, depletion of agricultural land, and conspicuous consumption of even highly endangered species for food and traditional medicine.

The human and economic costs are monumental, with people suffering from pollution related diseases and frequently joining in mass migrations to the cities because of the expired agricultural land. The cost to the country’s economy from environmental degradation, resource scarcities, and air and water pollution has been estimated to be about 4.8% of the country’s gross national product.
The present ecological crisis is primarily due to the human behavior which is facilitated by marketing. Marketing has been used as a tool for economic development. In the name of economic development, the policy emphasis is on increasing production, increasing output, increasing incomes and maximizing wealth. The route of development is entrepreneurship in commercial sense. An enterprise is a commercial institution pursuing an income goal that is supported by the society as a desirable goal. Thus, the pursuit of profit as a goal of the enterprise has a social sanction. But this pursuit is not devoid of its association with peril. Thus, the enterprise has got freedom to work and consume resources the way it wants. This unbridled freedom led the business enterprises to consume more and over exploit the natural resources consequently resulted into the present environmental concern but not yet the concern of the many enterprises.

Through change of the marketing mix and marketing strategies like promotion and advertising, people are guided by an unlimited desire for additional goods and are influenced by an attitude of grandiosity, of being superior, of having things under control, of improving one's position and of preferring new commodities to old ones. This over consumption on a vast scale productivity puts pressure on the resources of the ecosystem. The material indices of wealth rose, so environmental indices fell.

The influence of consumerism has made an impact on environment. Goods are used to create identity and a style. A great deal of time, effort and money goes into establishing what is likely to appeal to individual taste. Advertising increasingly aims not so much to provide information but to engage the emotions of individual consumers and enlist these emotions in the buying of products.

Convenience, freedom and choice are dominant ways of seeing the world. This is facilitated by the Technology. Technology has promoted individualization. Individualization describes the processes whereby people are encouraged to act as individuals and to behave as individuals rather than collectively. Over the last half century consumer goods have penetrated deep into the psychology of the consumers. Self expression is attained through the use of material possessions more clearly with
some goods than others. In the processes of increasing pleasure of the individual and increasing the number of goods in possession, environmental priorities have been sidelined. Therefore marketing has a great role in eroding the community life and increasing the private affluence which, in turn, stress the earthly resources.

Marketing has a vital role in the development processes of any economy and it is well recognized. Much of the economic activity is triggered by the marketing processes that offer and stimulate consumption opportunities to satisfy human needs and wants. In the processes of the development, marketers had seen only one side of the coin i.e. how to maximize wealth through satisfying the needs and wants of the society by indiscriminately utilizing the natural resources, but they did not see the effects of consumption which were made on the environment.

The traditional marketing practices encourage a consumption culture of “use and throw”, which resulted in a large volume of waste which in turn is considered the main cause for all kinds of pollution. Over the last few years, the consumer market has grown rapidly leading to products being packed in cans, aluminum foils, plastics, and such other non-biodegradable items, that resulted in a huge volume of waste, which in turn cause incalculable harm to the environment.

If such a waste generated by the post consumption is not managed properly, there are many negative impacts that may result i.e. risks and problems are associated with solid waste. Uncollected wastes often end up in drains, causing blockages which result in flooding and in sanitary condition. Mosquitoes have been in blocked drains and this will spread disease, including malaria and dengue. Aerosols and dusts can spread fungi and pathogens from uncontrolled and decomposing wastes. Plastic bags are particular aesthetic nuisance and increase the problem of waste management because of its non-biodegradable character. Besides, open burning of solid waste is not advisable because it causes air pollution and releasing of dioxins which are particularly more hazardous. From the above review, it is immoral to practice the marketing concept in its present form as it is the route cause for environmental crisis.
The critical role of marketing will be its ability to identify and develop consumption choices for society that meets its current needs without sacrificing the ability to meet its future needs i.e. the marketing is not only to look for green products which do not damage the environment but also to develop such products and services that will improve the deteriorating condition of the environment. Therefore a new approach of marketing ought to be evolved which should aim at serving the material wants of consumers through an ever increasing volume of goods without any attempt to use too much of resources on already overdrawn environmental resources.

Environmental marketing or green marketing or ecological marketing addresses unsustainable marketing activities and the resultant pollution issue. Simply speaking, environmental marketing can be referred as various marketing activities concerned with scanning of green marketing environment, identifying ecologically sensitive customers and studying their green marketing needs and motivation to designing, pricing, promoting and distributing products that have minimum detrimental impact on the environment. In essence, environmental marketing placed emphasis on sustainability of marketing activities of a firm and sustainable consumption of a consumer so that these create either a positive impact or lessen the negative impact on the environment.

In a free market, the role of individual choice is profound. Therefore the new approach viz., environmental marketing is expected to make a two-dimensional shift in the fundamental approach of the present marketing. One with respect to shaping customer needs and expectations, and the other with respect to providing customers with appropriate choices to meet their needs. The products’ aggregate impacts on everyone affected by its use are more important determinants of its acceptability than either user satisfaction or corporate profitability.

Recognizing the importance of the environment, independent India employs a wide range of regulatory measures right from 1927 to preserve and protect its natural resources and abatement of pollution generated from different sources. This was intensified after the Bhopal gas tragedy in the year 1984.
The Indian environmental legislation consists of three parts viz., environmental acts, environmental rules and environmental notification. The Government has introduced more than 200 hundred legislative measures throughout the country. Despite this plethora of environmental legislation, the quality of the urban and rural environment continues to decline. This is mainly due to the slack performance of the government agencies, political interference, and lack of will to confront entrenched industrial and commercial interests. No effective effort was taken to make people participate in the various legislative measures initiated by the judiciary. This is also one of the reasons for the present state of environmental problems. The plethoras of such enactments have, unfortunately, not resulted in preventing environmental degradation which, on the contrary has increased over the years.

Hence, environmental improvements cannot be achieved by enactment of legislation alone but it demands people's participation through changing their attitude and behaviour toward the environment. The present study sheds light on solid waste generated by the consumption practices. The plastic non-biodegradable carry packages have become a part of the consumption practices. The plastic carry package no doubt provides convenience but is also associated with perils and environmental hazards. Therefore, the present effort is to make an attempt to study environmentally conscious consumers and their consuming behavior of environmentally friendly carry packages. Past researches on consumer's attitude toward the environment have been conducted mostly in the context of developed countries. There is a need to investigate this problem in less affluent societies. Hence, the present attempt.

The study was conducted with the specific objectives of identifying environmentally conscious consumers and studying their attitude, behaviour, and perception on environmentally friendly carry packages and also to analysis the discrepancy between attitude and behaviour of the ecologically concerned consumers.

Methodology

This study was conducted in Pondicherry town, a small port town of the Union Territory of Pondicherry. The generation of waste is very high not only due to the
existing population but also due to an estimated floating population of 1,50,000 per
day. A sample of 500 was drawn adopting convenience sample method among the
consumers who visited the 10 super markets. The interview schedule was
administered on the selected sample. Sophisticated statistical tools such as T. test, F.
Test, Factor analysis, Cluster analysis, Reliability test, Multiple regression analysis,
Discriminate analysis and Structure-matrix were employed for analysis purpose.

Summary of Findings
Location

Respondents of both urban and rural have high awareness about solid waste,
climate charge, effects of pollution, recycling and they have strong attitude in
rejecting excess packages and use environmentally friendly packages. Urban people
have strong attitude that pollution control responsibility is the government’s look after
than the rural respondents. Urban people have more conservation activities than the
rural people and both the groups do not have any idea about use of the earth’s
resources for improving their status. Both the groups have responsible consumption,
and are in the same view that environmental problem is not their problem but it is the
problem of the government and they are not ready to change their consumerist
behaviour, and admit that they are unable to do anything constructive for their future
generation. Rural and Urban people who live in clean surrounding do not segregate
the waste in their houses. Both the groups intend to change their purchase and
consumerist behaviour if it reduces solid waste and urban people are ready to spend a
little more for environmentally friendly packages. and intend to use recyclable
packages. Both urban and rural respondents use strictly environmentally safe
packages and non-biodegradable packages also but urban people use more non-
biodegradable packages than the rural people.

Education

Different groups of respondents based on education have the same amount of
awareness on the different aspects of environment, and all have strong and positive
attitude about rejecting lavish packages and environmentally friendly packages. All
of them follow conservation measures but they do not have any opinion regarding
improving their status.
The respondents of various categories of education follow responsible consumption but the elite groups are not ready to agree that environment problem is the government problem and are not ready to change their consumerist behaviour. Highly educated respondents are ready to do something for their generation than the graduates and respondents of other categories. Respondents of various groups who live in clean surroundings do not segregate the waste at source and are ready to purchase any package design. Highly educated groups are ready to spend something more for environmentally friendly packages and ready to use recyclable packages than the other groups. Irrespective of education, all of them use environmentally friendly cups and other packages as well.

Gender

Female respondents have more awareness than the male respondents about different aspects of environmental issues, and they have strong eco-attitude than the male group in respect to rejecting lavish packages and pollution control responsibility. Female group follows more conservation activities than the male group, and the male groups use less resource for improving their status than the female. More responsible consumption exists in male group than female group. Both the gender groups are not ready to change their present habit of consumption and they have learned helplessness. Both the gender groups do not segregate the waste at source and they are ready to spend more for environmentally friendly packages, and are ready to use recyclable packages. Both the gender groups use environmentally friendly cups for consuming tea and coffee, and also use unfriendly packages as well.

Occupation

Irrespective of different occupation groups, the awareness level with respect to different environmental aspects is high. Government employees and agriculturists have strong eco-attitude than the other categories of occupation, and the same group follows the same level of responsible consumption and they consider the environmental problem as the government problem.
Different categories of occupation group are not ready to change their consumerist behaviour, and all have the same level of learned helplessness. All live in clean surroundings but they do not segregate the waste at the source itself. All are ready to spend a little more for environmentally friendly packages, and are ready to use recyclable packages and use strictly environmentally friendly cups and unfriendly cups as well.

Income

High income group respondents have more awareness about environment issues and have very strong positive eco-attitude than the less income group. Higher income group respondents follow conservation activities. All income groups do not have any opinion regarding improving status. High income group respondents do responsible consumption and the same group also agrees that the environment problem is not their problem. Low income group respondents are ready to change their consumerist behaviour, and all the income groups have learned helplessness. Different income groups live in clean surroundings, and they do not segregate the waste at the source.

High income groups are ready to spend a little more for environmentally friendly packages than the low income group, and they are ready to use recyclable packages. All the income groups strictly purchase environmentally friendly packages, and the high income group purchases more non-biodegradable packages than the other income groups.

Age

While all the respondents have awareness and positive eco-attitude, the middle age group respondents have more awareness and strong positive attitude towards environment. Middle age group respondents follow more conservation activities and use less resource for improving their status. Further, they have more social responsibility than other age groups. Low age group people are ready to change their consumerist behaviour than the middle and old aged respondents. More number of respondents in the middle age lives in clean surroundings and different age groups
do not segregate the waste. The respondents in the age group of 31 to 50 intend to use any package design and to spend more for environmentally friendly packages, and are ready to use recyclable packages.

The teenage group and middle age group respondents strictly use environmentally friendly cups, and the same group use unfriendly packages too due to non-availability of environmentally friendly packages.

Marital Status

Both married and unmarried respondents have the same level of awareness about the environmental issues and have the positive eco-attitude. Married group follow more conservation activities and use less resources for improving their status and have more responsible consumption than the unmarried respondents. Married people see that they are also a part in the environment problem. Unmarried respondents are ready to change the consuming behaviour than the married respondents and both the groups have learned helplessness.

Married group would like to spend more for environmentally friendly packages and are ready to use recyclable packages too than the unmarried group. And both the groups use environmentally friendly cups and other non-biodegradable packages also.

The applied regression analysis was used to identify the factors influencing the solid waste, environmentally safe living, use of bio-degradable and recyclable packages, purchase of environmentally safe packages and purchase of any packages.

A change in the present consumerist behaviour and the attitude of rejecting lavish package would make a world of difference in reducing the solid waste volume.

Awareness about effects of pollution, attitude of rejecting excess package, environmentally friendly packages, and following more responsible consumption would help the respondents to have an environmentally safe living.
Awareness about recycling, attitude of rejecting lavish packages, attitude toward environmentally friendly packages and understanding environmental issue as their issue and not the Government's issue would increase the intention of using biodegradable and recyclable package.

Emphasizing awareness about recycling, development of attitude towards rejecting lavish packages, attitude of using environmentally friendly packages, following conservation measures, and attitude of using less resource for improving their status would influence the consuming behaviour of respondents who purchase environmentally safe packages.

The purchasing behaviour of environmentally friendly packages can be influenced by emphasizing awareness about solid waste, development of attitude to reject lavish packages, undertaking conservation measures, exhibiting responsible consumption and living in clean surroundings.

The cluster analysis used to segment the respondents into three groups viz., low, moderate and high on the basis of their opinion about various environmental aspects to have separate marketing strategies for them, shows that a vast majority of the respondents have high level of awareness about various aspects of environment and particularly they have very excellent awareness about climate change and almost all the levels of consumers have strong positive eco-attitude.

Three-fourths of the consumers follow conservation activities and nearly half of the respondents have poor understanding about the use of natural resources for improving the status. Almost all are exhibiting responsible consumption attitude but they have poor understanding about the environmental problem i.e., environmental problem is not the Government problem but all are part to it. Three-fourths of the respondents are not ready to change their present consuming behaviour, and the same number of respondents have learned helplessness too.
Majority of the consumers live in clean surroundings and they do not segregate the waste at their source. Moderate group is not particular about package design. Low level respondents are not ready to spend more for environmentally friendly cups, and high and moderate level respondents use other packages as well.

All are ready to use package with any design and high and moderate level are ready to spend more for environmentally friendly carry package and are ready to use recyclable packages too. High and moderate group use only environmentally friendly cups for consuming tea and coffee and use other packages as well due to reason stated earlier.

An attempt has been made to know the purchasing behaviour of the respondents group with different level of perception about environment.

Different level of awareness about solid waste, recycling, climate change and effects of pollution do influence in a small way with respect to strictly using environmentally friendly cups but significantly influence the consumerist behaviour of any packages but the result is negative, i.e., the awareness in high level group is more prone to any packages due to non-availability of environmentally friendly packages.

The purchase behaviour dimensions of the various groups are influenced according to their respective levels of attitude. High and moderate attitude groups use friendly and unfriendly packages too. Different levels of conservation activities influence both purchase behaviours as stated earlier but all of them also use non-biodegradable packages.

Different levels of perception about using nature to furthering their status, responsible consumption, and environment problem is the Government problem does not have any influence on the consumerist behaviour of the respondents. Different levels of change of habit influence the purchasing behaviour of the respondents.
Groups with different level of learned helplessness and segregation of waste do not influence the purchase behaviour of the respondents.

Groups living with high level of clean surroundings purchase strictly more environmentally friendly packages and are more prone to using any packages also. Groups with different levels of intention to spend more for environmentally friendly packages influence the purchase behaviour of the respondents' to the extent of the level to which they belong.

Discriminant analysis, applied to ascertain which of the environmental variables can best discriminate between the groups shows that more alienation, less environmentally friendly packages, low eco-attitude belong to low group and they have low intention to purchase environmentally friendly products. They purchase more other packages that increase the solid waste. Consumers living in urban area with higher occupations have moderate intention to purchase environmentally friendly packages.

Consumers with conservation activities, being environmentally friendly and positive attitude towards rejecting excess packages are more likely to belong to group with low purchase intention. Female consumers with more conservation and less learned helplessness belong to moderate purchase intention. Conservation of environment, environmentally friendly attitude, positive attitude towards rejecting lavish package and environment problem is the Government problem are the discriminating factors, and they belong to low purchase intention group regarding recyclable packages.

Environmentally safe packages, conservation of environment, environmentally friendly attitude, purchase intention towards products with recyclable packages and purchase intention to products with any package design are discriminating factors and influence the purchase intention of low group. In the case of purchasing any packages, environmentally friendly attitude discriminate the low groups from the other two groups.
The major findings of the research

1. Personality variables viz., Alienation and locus of control, have strong capacity in identifying the ecologically concerned consumers.

2. Socio demographic variables viz., income, age, education, gender, marital status, location, conservation, social responsibility have capacity in predicting the ecologically concerned consumers.

3. Environmental awareness is high in the female group and they have strong eco-attitude than the male group.

4. Almost all the respondents are aware of various environmental problems and particularly climate change and they have strong and positive attitude towards environment.

5. Conservation activities are high among the respondents but much higher among the age group of 31 to 50.

6. All are ready to purchase and use environmentally friendly packages.

7. Highly educated and married women are ready to spend more for environmentally friendly packages.

8. Youngsters and unmarried are ready to change their habit of present consumption.

9. Segregation of waste at source is not at all practiced.

10. Majority of the respondents are strictly using environmentally friendly packages for consuming tea and coffee.

11. Attitude—behaviour discrepancy is there due to cultural and market condition. Non-availability, few choices, cost are considered the reason for this discrepancy.

12. Marketers do not have any strategy to fulfill the expectation of this new group.

Suggestions

In order to have a satisfactory, efficient and a sustainable system of solid waste management the following suggestions are made for government, consumers, and industries.
Suggestions for the Government

1. Land filling is an expensive method of disposal, and there is scarcity of land in Pondicherry. Besides, there are a lot of protests and objections for disposing off the solid waste in the selected dump yard. Therefore, the authorities should look for options such as reduction of the waste at the source.

2. As most of the manufacturers do not follow the standard fixed for manufacturing the plastic carry packages, either strengthening the administrative control or banning the manufacturing by the Government is the need of the hour.

3. The loss of the employment as a result of banning the manufacture of carry bags can be compensated through rejuvenation of jute industry, and encourage industries to manufacture environmentally friendly packages.

4. Maximum possible incentives may be extended to encourage manufacturers to produce eco-friendly packages.

5. Awareness about the segregation of waste, advantage of using environmentally friendly packages should be created on a war footing through all the Medias on regular basis. The Government should purchase a slot in all the Prime TVs including the local channels to promote this.

6. As a part of promotion, the goodwill of the leading personalities in different fields can be utilized.

7. Print and electronic media, to show the social responsibility towards the society, may allot space and slot proactively to promote the consumption of environmentally friendly packages.

8. It is necessary to harness and integrate the role of private sector, NGO's educational institutions, and rag pickers for better solid waste management.

9. Training should be imparted to NSS, NCC students at school and college level targeting waste segregation, waste reduction at source, in order to enable them to disseminate information about solid waste.
Suggestions for Consumers

1. The waste must be segregated into recyclable, biodegradable and non-biodegradable by each and every house, business houses, and industries.

2. Consumers should develop a habit of carrying cloth, jute, and paper bags to carry their purchases.

3. Consumers are suggested to think of reducing the purchase frequency which will significantly reduce solid waste.

4. Consumers are suggested to develop a habit of abstaining from the use of non-biodegradable packages.

5. Consumers are also suggested to insist that the products should be supplied only with environmentally friendly cups only otherwise they should reject the products. This will make a world of difference.

6. Tendency to use less packaging or adoption of the recyclable, reusable packaging material must be promoted.

Suggestions for Industries

1. Making availability of environmentally friendly packages with many choices in the market is a must option to be considered. It is a potential business opportunity to business houses.

2. Manufacturers can think of manufacturing non-traditional carry packages which consume less resources and a measure of cost saving also.

3. New technology can be promoted to manufacture environmentally friendly packages such as bio-degradable plastics.

4. Environmental orientation focusing "cradle to grave" approach to production managers and production engineers should be considered.
5. Communication of how the use of products empowers consumers to help improvement of the environment will attract more environmentally conscious consumers.

Conclusion

Making a Difference

The ecological crisis is due to the present marketing and consuming behaviour which encouraged over consumption and life style of dependence on goods that resulted into environmental catastrophe. In other words, present environmental crisis is all due to individual choices. Therefore, the solution is using the new paradigm viz., environmental marketing to change unsustainable life styles and keep people at sustainable levels through redefining all the consumption choices.

Individual action is a way to begin to make a difference. One way of understanding individual initiatives to reduce over consumption is by adopting refuse, reduce, reuse, repair and recycle. Refuse unnecessary goods and services. It is best to refuse plastic carry bags and instead use own cloth bag. Less demand for plastic bags would mean less production and finally less-non-biodegradable waste.

Reduce over consumption of goods and services as much as one can. This will make an impact in waste management. Reusing goods will reduce the demand for new goods. This would imply that the demand on natural resources for the production of new goods will also reduce. Repairing goods reduces the need for new goods and saves natural resources used in the production of the new goods. Recycling goods ensures that they are used again in another form. This reduces the demand on wood pulp and saves trees.

Undoubtedly, consumers want to have their needs satisfied by various goods and services. This is what marketing strives to achieve. In addition many consumers now feel that they must also take an active part in protecting, preserving, and conserving the environment. This is possible only through right individual choices and behaviour. As consumers become more cognizant of the limitations of Mother Nature,
they may change or modify their behaviours. These behaviours are not only in relation to what they consume, but how they consume as well. Making a difference in the consumerist behaviour is the need of the hour.

**Food for Future Research**

The rise of green marketing has stimulated the most research in the area of consumer behaviour. How consumers integrate green issues into the decision-making processes appears to be of utmost interest for practitioners. The underlying rationale is that once organizations understand the green needs of their consumers, then they can subsequently better satisfy consumer needs. Additional change or modification of consumer behaviour, to integrate environmental issues in consumption patterns, has also been interesting to many practitioners.

Consumer awareness about climate change is high. Therefore, business response to climate change is an area of interest where sufficient research is needed. Consumer behaviour regarding the travel mode is a potential area of future research as the consequence of air pollution is apparent. Consumer behaviour in the tourist places is another area of academic interest.

Public policy and macro-marketing have also received academic attention. Governmental regulations relating to the environment appear to be continuously changing. These changes emanate from the society’s changing values as well as mankind’s development of a body of environmental knowledge.

Yet another academic area for research is the industrial marketing. Despite being the least-examined topic, it is probably one of the most important. The production process and its impact on marketing deserve more interest. Borrowing some of the tenets of management and integrating into the marketing in order to address some of the concerns is the need of the hour. Understanding some of the organization behaviour, and motivation concepts and how these concepts can be modified to integrate green issues may be one of worth mentioning areas that need to be researched.