

# ANALYSIS OF GREEN PRODUCTS AND INNOVATIONS WHICH ROOTS FOR SUSTAINABLE DEVELOPMENT

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## Abstract

Green technology is most pivotal concept, needed for achieving the global sustainable development. Today, the earth is in need a new innovation, which forms the base for a better environment. The main objective of this study is to understand and emphasize on the requirement of innovative green products for our mankind and also to realize the negative effects of non-green products. In this study, the required data were collected from various resources and analyzed with suitable statistical methods. The study was conducted in Cuddalore town of Tamilnadu. The study reveals that green products have more positive impact and eradicates issues related to environmental problems. It throws light on how it helps for the sustainable development.

**Keywords:** Green technology, green products, environmental sustainability, organic products, etc.

## 1. Introduction

India, being a largely diverse country based on its biodiversity, is facing issues today. India covering nearly 2.40 per cent of the world's land mass, it contributes for 7-8 per cent of the world's total plant and animals species, essential ecosystem and prominent genetic resource which pay way for providing to sustainable future. The conventional agricultural methods may give short gain in production but it is not enough for the sustainable future in long-term. Green product has the capability to produce sufficient food in the short-term as well as in the long-term which are of supreme quality. Green marketing solves issues related to industrial ecology and sustainability of environment. Terms like phosphate free, recyclable, ozone friendly and environmental friendly are some of the concepts that are associated with green products. The overall objective of green products is to reduce impact on the environment, as well as to provide new efficient outcomes. Eco-innovation generates changes not only in products but also in their company's environment.

## 2. Importance of green product and innovation

Green products become the favorite one and are being adopted widely by many companies worldwide and its worldwide adoption is justified by the following reasons:

**Opportunities in green product:** As demand evolves, many companies see these changes as a doorway to exploit and have a competitive advantage over companies marketing non-environmental product or service alternatives.

**Government pressure:** Because of government's interest in protecting mankind and society, green technology strategies have been implemented. Decrease in the production of harmful by products which modify consumer and industry's use. Government establishes regulations which are set to control the amount of hazardous waste produced by company for manufacturing the product.

**Competitive pressure:** Another pivotal point in marketing environment friendly product is companies desire to maintain their competitive position. Normally firm see their competition promoting and emulating their products environmental behaviour. Even some company modified their entire industry and reduced its environmental behaviour because of this competitive pressure.

**Being responsible:** Now, many companies are realizing their role in protecting environment. These companies are starting to understand that they belong to a wider community and therefore must behave in an environmentally responsible manner.

### 3. Green products and its characteristics

Products which are manufactured through green technology which causes no environmental hazards are termed as green products. Promotion of green technology and green products is necessary for protection of natural resources and sustainable development. By and large the green products are defined by following properties:

- Products which are grown naturally.
- Products which are recyclable, reusable and biodegradable.
- Products with natural ingredients.
- Products containing recycled contents and non-toxic chemical.
- Products contents under approved chemical.
- Products which do not pollute the environment.
- Products which are not be tested on animals.
- Products which have eco-friendly packaging i.e. reusable, refillable containers, etc.

### 4. Green product and its marketing

Large numbers of global companies are now implementing green product marketing practices successfully. Companies who indulge on green marketing should adopt certain principles which are listed below:

- Follow virgin green technology process for reducing impacts in environment.
- Establish a management and control system which will lead to the adherence of strict norms regarding environmental safety.
- Using as much environment friendly raw materials as possible.
- Exploring the recycling possibility of the used products, so that it can not be wasted and also be used to offer other benefits with reduced wages.

## 5. Review of literature

Lot of literature is available on green technology, green marketing, and consumers' awareness about green products and their willingness to purchase them over conventional products.

**Tanushree (2010)** stated when compared with conventional food products, organic products are free from chemicals which causes harm and are enriched with higher nutrition levels so they are mostly preferred by consumers.

**Roy and Dhumal (2011)** stated that Indian government is playing a significant role in promoting organic agriculture. India could be amongst the top ten countries, having cultivation land under organic farming. Environmental issues like global warming, and natural resources depletion has made the consumers shift their interest from conventional products to green products.

**Henion and Kinnear (1976)** denoted that green users are those who are environmental conscious and include a number of green products in their purchases and are environmentally conscious.

**National Association of Attorney Generals (1990)** stated that companies too are under social responsibility to strictly follow and implement any environmental laws which are prescribed by the government from time to time for the protection of the natural resources.

**Gadenne, et al. (2011)** state that green technology focuses on manufacturing of quality products, performance, pricing and convenience that can fulfill the needs and wants of the mankind in an environmental friendly manner.

## 6. Statement of the problem

Nowadays awareness on green product among the people is rising which shows the importance of green product. It is mainly due to the bad impact of non-green products on health of mankind. Artificial fertilizers, manures and pesticides create issues even to the level of cancer. In order to increase the understanding of impact of non-organic product and to make people start using green products for regular consumption. It is the reason for carrying out this research.

## 7. Objectives of the study

1. To study the importance of green products.
2. To identify the requirements of the green products.
3. To analyze the features of green products.
4. To offer suitable suggestions for sustainable development.

## 8. Methodology

Exploratory and descriptive research designs were involved. The data were collected by personal interview and the information gathered was recorded on schedule. The data were collected through primary and secondary sources. Schedule method was employed for collecting the primary data. The secondary data were collected from books, magazines, articles, journals, blogs, websites, etc. The study was carried out in Cuddalore town.

## 9. Data Analysis

**TABLE 1**  
**Comparison of Manufacturing Methods and Its Sustainability**

	Fruits and vegetables	Meat, fish & poultry	Dairy products	Frozen and processed foods	Nondairy beverages	Coffee and tea	Beer and wine	Others
Organic	67	66	92	40	34	44	60	20
Harmful non organic	13	23	1	27	29	7	15	44
Harmless non organic	20	11	7	33	37	49	25	36

Product types include organic foods which comprises of organic fruits and vegetables, organic meat, fish & poultry, organic dairy products, organic frozen and processed foods, organic nondairy beverages, organic coffee and tea, organic beer and wine and finally other product types. Manufacturing methods of these products are further divided into three groups namely method using environment harmful substance or not non-organic type and organic type.

## 10. Suggestions

1. Make the environmental green products to perform better than their alternatives.
2. Upgrade and deliver the user desired value of green products and target mostly on relevant user groups.
3. Widen the mainstream appeal by combining user desired value into green products.
4. Educate users with marketing messages which clearly express environmental properties with desired consumer value.
5. Design green products in such a way that their properties remain as an answer to expectation of consumers.
6. Spread awareness among consumers using modern technology by creating educational internet sites about green products with consumers' desired value.
7. Employ claims for green products and consumer benefits which are specific and meaningful.
8. Arrange eco-certifications for green product from trustworthy third parties and spread awareness to consumers about the importance of certifications.

## 11. Conclusion

Green products are spreading globally. If they are directed and taken correctly then they can produce drastic change in business world. But, government must make strict rules regarding green product which is necessary for freeing the world from pollution. With the threat of global warming, it is very essential that green product becomes a norm rather than an exception. Green product helps for the sustainable development of environment, which is a must needed one for the future generation.

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