Green Marketing - A Need of Times for Business

Pankaj Kulkarni

Aruna Manharlal Shah Institute of Management & Research / Marketing Department, Mumbai University, India

Abstract - In today's times the word environment, climate change have become ubiquitous across the globe, it has become a great challenge with the rise of rapid industrialization & urbanization to keep the environment under safe conditions. A large percentage of the population is also now becoming serious about issues like global warming, environmental pollution and its harmful effect. It is in this context that the term 'Green marketing' has been developed and is rather an essential part of business organizations today. It is considered a feasible option to have a sustainable development.

This concept has opened vast opportunities for companies to have a separate line of products tagging the eco-friendliness for those desiring eco-neutral product.

In this research paper the emphasis is made on the root concept, need in today's times and the initiatives taken in that direction by Indian Government and business houses. It also studies relevance of Green marketing .It is a research based on data collected from multiple sources. Various newspapers, company websites, articles on internet, research papers, and books have been referred to understand the relevance of Green Marketing. The paper aims to find out what actually Green marketing concept is and how adaption of the same by business shall make it competitive as well as help in protecting the environment. It deals with respect to Indian market scenario and explores the current practice adopted by companies, the challenges and opportunities businesses can have with green marketing and the role Green Marketing can play in future.

Keywords - Green Marketing, Environment, Global warming, challenges, Environmental pollution

I. INTRODUCTION

6 The Earth, the air, the land and water are not inheritance from our forefathers but on loan from our children, so we have to handover to them at least as it was handed over to us '- 'Mahatma Gandhi'

It is appropriately mentioned by Father of Indian Nation, however in today's world we have completely forgotten it, only recently after Climate change conferences one can hear almost everyone from government to a man on street talking about eco-friendly, going green, adopting green etc. The importance attached to the term "Green " is so valuable that organizations today have also realized that it is their responsibility beyond profits on balance sheet to be accountable for a good environment.

The seeds of this were sown at the Stockholm conference held during June 1972 titled –"United Nations conference on Human environment", it was the 1st ever UN summit on environment and attended by 113 nations. It really put environment on the political agenda which led to creation of Environment ministry by different nations, a concept which was never present before.

This paved the way further to the Earth summit – 1992, held at Rio de Janeiro, which made a break through that governments of various nations had to do a rethink on environment development and find ways to halt the destruction of environment, its natural resources and pollution of the planet.

The recent Paris agreement brings all nations of the world under a unified cause to undertake efforts to combat climate change, it's main aim is to garner global support for the climate change by making efforts to keep global temperature rise this century well below 2 deg. Celsius above preindustrial levels and also make continuous efforts to limit the temperature increase even further to 1.5 degrees Celsius.

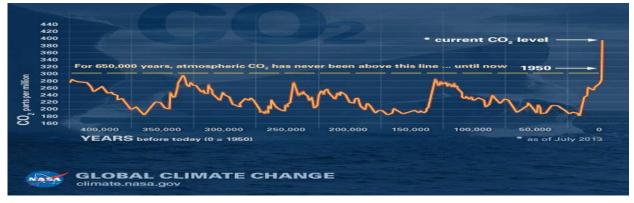


Fig 1 Graph showing the levels of Carbon monoxide in earth's atmosphere (Source: https://climate.nasa.gov/climate resources)

The Carbon monoxide levels shown above does raise a serious concern and thus businesses have to realize that it is necessary to make mandatory contribution for a clean and safe environment, in this context Green Marketing will play a crucial role.

"American Marketing Organization defines Green Marketing from different perspectives.

- Retailing Definition The marketing of products that are safe for environment.
- Social Marketing Definition The development and Marketing of products to minimize negative effects on environment.
- Environment Definition –The efforts by organizations to produce, promote, package and reclaim products in a manner that is very sensitive to ecological concern."

Source: http:/ama.org/

The definition gives varied approach and is not unique, thus Green Marketing is not a simple task but a part of different perspective vis a vis current practice of Marketing as followed by business houses.

The concept being not diffused and fully understood many still believe that it refers to a promotion and advertising of the products with some environment characteristics, so often terms like eco-friendly, formaldehyde free, non-toxic, ozone friendly etc. prefixed to products seem to suffice the need of Green marketing, however it is not sufficient.

II. NEED FOR GREEN MARKETING

Whenever one browses through the news today one will invariably find news mentioning the alarms being raised at the environment condition, like the recent dust storms in Rajasthan, Haryana or the last year end smog problem in New Delhi, it was the worst smog with the Air Quality Index passing the 400 mark level on the scale of 500 which indicates Hazardous conditions for health, also this is not one off event, even other cities are found to have a pollution at alarming levels, a survey of Air quality index conducted by Central Pollution Control Board (CPCB) in Nov'2017 includes 12 cities above the 400 mark level AQI with Varanasi top in the chart.

Below are the most polluted list cities as per the CPCB survey with the figures in bracket indicating the Air quality index (AQI)

Table I Name of the city (AQI)

Ghaziabad (485)	Gurugram(480)	Noida (470)
Delhi (468)	Bhiwadi (463)	Lucknow(462)
Kanpur (461)	Patna (428)	Faridabad(428)
Muzaffarpur(409)	Agra (404)	

Source: https:/www.hindustantimes.com

This is just one of the area of Pollution aspect, other areas include river pollution, Lake Pollution, Industrial waste dumping, lack of sufficient awareness of the effects of usage of inappropriate plastic bags, and then dumping them on road etc.

These if not controlled will have a harmful cascading symptoms in form Water pollution, Air Pollution, Global Warming, Flora & fauna extinction and it is not limited to one nation but concerns every nation on the planet.

As such it becomes imperative for organizations to think seriously about Green Marketing and utilize the concept for satisfying the needs of the customer and earn better profits without causing any harm to nature.

Green marketing is a holistic marketing concept whereby the organizations have to realize that human wants are unlimited, hence it is a prime duty of businesses that the available resources be utilized to utmost efficiency so as to preserve them as well as to ensure that the disposal of the products & services happen in a manner which is less harmful to the environment. So Green Marketing can't be neglected today.

A suitable definition to support the above is given by J.Polonsky, (1994) who defines" Green Marketing as a term consisting of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants such that satisfaction of the needs and wants occurs with minimal detrimental impact on natural environment".(Polonsky, Michael Jay, 1994)

Apart from environmental concerns one can think of collateral damage a bad environment will have on industries like fishing, adventure sports, tourism, and food processing which are dependent on the physical environment, so any damage to the environment will have negative impact on these.

With these implications in mind many firms have now started adopting the Green marketing concept in their practice.

III. GREEN CATEGORY PRODUCT

Since the diffusion of Green Marketing is still in its infant stage their lies a difference in view of the term eco-friendly and meaning of eco-friendly product amongst Indian people. The eco-friendly product are mostly purchased because of some awareness on climate hazard, global warming, and environmental problems being generated by media, however when it comes to a choice for a consumer it will automatically fall on the cheaper product available.

For example – a carry bag term will immediately trigger plastic carry bag than a biodegradable or eco-friendly bag.

For a Product to be counted as a Green Product it can fall in certain categories as mentioned hereunder.

A. Green Process

While manufacturing the product it is done with due consideration given to the people who work are well within limits on exposure to chemicals, the manufacturing is done using energy –efficient production, there is a use of recycle material used in Packaging, the premises has effluent treatment and uses energy prudently.

B. Recycled Content

Product is fabricated with post – consumer materials or post – industrial by productlike for example – H & M a leading company in fashion has launched a Garment collecting initiative in 2013, till now around 55000 tons of garments have been recycled and given new life.

C. Low toxicity

The product manufactured is less toxic than the comparable products used for the application, like for example – a formaldehyde free wood particle is less toxic.

D. Sustainability

The product is made by good use of available resources and is renewable, it is focused on the whole rather than any specific characteristics and is based more on relationship i.e. it takes into account the human health and environment factors in addition to the cost, function and looks of the product like for example – CNG automobiles

E. Recyclable

The product manufactured can be reused or re-processed after use and re-fabricated like for example PET bottles which are crushed, washed and sold as washed flakes, these are then used to make Polyester fibers which is used as filling material for cushion, pillows or converted into fabrics for upholstery use.

F. Bio-degradable

The product manufactured returns to earth naturally under exposure to various elements like for example – carry bags made by Greendiamz Biotech Company under the brand truegreen Bag, It offers these products made from Biolice – using process which is unique in compostable market from wholesale grain.

IV. CHALLENGES IN GREEN MARKETING

A. New concept

Generally price is a trigger of first impression for a consumer and anything which the consumer thinks perceptually is of higher price then he or she becomes reluctant to buy into. The consumer today is much more aware about the benefits Green products will offer, however it is still an infantconcept and hence the dangers of environmental threat needs to be informed. The businesses should highlight their Green movement rather than just focusing on the green product being sold. Similarly the consumers should be educated and more awareness about the green products should be created justifying their benefit and thus make them inclined to purchase green products.

B. Perseverance

Business houses cannot expect that the Green product be accepted immediately on their launch, they need to persevere through advertisements, various promotion & other campaigns to imbibe in the consumers mind about the various advantages they have on buying the green product. The companies should also quote how they have benefited themselves by adoption of Green initiative by quantifying in Rupee terms thus making a realization amongst the consumers that they to shall also benefit over a period of time.

C. Avoid Myopia

Business houses need to look at Green product manufacturing as an investment rather than an expense. They need to identify first what criteria does a consumer look into while buying the products and should concentrate on selling the benefits than the product features to them. Do this right and the customer might switch the brand or even pay a premium price for Green products.

Albeit the above is easier said than done companies should consider the ROI time frame at a much longer duration than just immediate near future, else by just focusing on the ROI to be covered in short time it may price the green product exorbitantly or not focus on customer criteria. It will thus lead to myopia and also the product will not be accepted by the market.

V. ADOPTION OF GREEN MARKETING BY BUSINESS ORGANIZATIONS

An adoption of Green Marketing by business organizations do provide them a differentiation purpose in the industry they operate in. It enables them in following fashion

A. Opportunities

As the environment protection awareness gains more ground amongst the consumers across the world it gives an opportunity for companies to capitalize and gain advantage over others in the industry.

An example of this -

1): Asian Paints -The company ventured 7 years ago by offering products with lead & heavy metal free guarantee, and now moving towards a complete green assurance products. It has launched Green assure range of paints which is more than a low volatile organic compound.

They offer paints certified under leadership standard for paints, the Green seal Trademark – GS11 standard which is used for certification by companies around the world. GS11 standard certified paints are formulated without carcinogens,

heavy metals & alkylphenol ethoxylates (APEO's) and provide a pollution free painting thus causing no side effects. They also use recycled packaging thus contributing considerably to the environment cause.

B. In tune with Competition

A green marketing initiative launched by one company compels others in the industry to follow suit as every company operating in the industry would not like to forego the goodwill it will be able to generate by adoption of green marketing.

An example of this-

2): Berger paints -

Adoption of green initiative by competition has given the 2nd largest paint company in India i.e. Berger paint to be not left behind and be in tune with them. It has been given Green-Pro Certification by CII- IGBC (Indian Green Building Council).

The Green pro certification is awarded by CII – IGBC to encourage companies to be more environmentally oriented and contribute to the goal of safe environment. The certification is based on different criteria's like Raw materials input, manufacturing process, recycling etc.

C. Social Responsibility

As the climate change, go-green initiatives have caught momentum due to various governments across the globe taking the matter as a serious concern companies have begun to realize that they are members of a society at large and hence have a prime responsibility to be concerned about the environment.

This gives rise to the concept that they have to achieve a balance between environment objectives as well as profit objectives, it is thus imperative that the environment concern is integrated into the company's corporate culture.

An example of this -

1): Asian Paints

The company is focusing on reducing the effluent generated at the plants and looking into different ways to reuse the treated effluent. It is focusing on efficient and effective effluent treatment management system.

The company adopts the following

- Utilize the Reverse Osmosis rinse water for cleaning of empty Raw material barrels.
- Re –use the caustic solution for Twin shaft dispenser and mixers cleaning
- Adopted 100% bio-degradable bio-blocks in urinals to reduce generation of grey water
- Re-use wash water generated during cleaning of transfer pipelines.

- Use the treated effluent from effluent treatment plant back into the operations.

Thus by utilizing various initiatives the company has achieved zero liquid discharge outside the factory across all the manufacturing plants offering decorative paints.

By adopting the above it is thus creating an impression in the mind of its customers and public at large that they are a business house which is a very good & responsible neighbour leading to a goodwill and also might get considered as a priority in consideration set when the customer may purchase a paint.

VI. GREEN MARKETING REAL TIME EXAMPLES

A. .Indian Railways

Ministry of Railways is working to replace the current lighting system by 100% LED lighting on all stations. Till November '2017 about 20 lakh LED lights at stations have been replaced across various Railway Zones under this

- 1): Achievement- During 2016-17 a 5.5% reduction was achieved in non-traction energy consumption (lighting used for railway staff colonies, platform, Railway station premises). The breakup of the reduction is 4.1% reduction in energy consumption despite increase in load by 1.4%. It gave a savings of Rs 100 crores(approx. US\$ 17 Million).
- Once it achieves fitting LED on all stations it is estimated to save about 240 Million units of electricity which is about Rs 180 Crores / year(approx. US\$ 26 Million) of savings to the Railways.

Indian Railways organization for Alternate fuel (IROAF) has been given Golden Peacock Award for Eco-Innovation in 2017. It has substituted the fossil fuel (Diesel) by environment friendly CNG in DEMU passenger train services. The CNG based dual fuel engine which is used in DEMU trains hasled to savings in diesel fuelby CNGup to 20%. This has helped to reduce emissions by bringing down Nitrogen oxide by 16%, Carbon Dioxide by 6% and Particulate Matter by 18% & also achieving economy in fuel cost by 8%.

Present technology of 20% substitution of Diesel by CNG will save up to Rs 1360 crores (Approx. US\$ 225 Million) per year when implemented over entire fleet of Diesel engines.

Key pick – Table II

LED Installation Target by March 2019

Description	Target	Actual as on 18.07.2018
Installation of LED bulbs	770 Million	303.19 Million
Annual Energy savings	100Billion Kwh (expected)	39374MnKwh
Annual estimated GHG emission reduction	79Million tonnes of CO2	31.89Million tonnes of CO2

Source: https:/www.ujala.gov.in

The table indicates achievement of Approx.39% of the intended target and needs more to be done. Albeit one might be aware as well as might be observing at stations that LED lamps have taken over the traditional tube light, the fact is it is still not highlighted about the benefits & savings in energy it has achieved.

The savings benefit can be used by railways as well as those businesses which supply LED bulbs, CNG etc. can see this as an opportunity to spread marketing awareness about their products as well as about the benefits of using them. Banners can be put up to begin with at main junction Railway stations highlighting the advantages gained due to it's usage with specific mention to the savings in energy bill, reduction in pollution, savings in cost achieved at that particular station as well as for overall Railways.

As millions of commuters pass these main stations such banners will definitely act as a thought provoking which might enable many commuters to switch over to LED in their house as well and on CNG for their vehicles.

This will ultimately benefit the LED,CNG supplying companies as well as contribute to the overall achievement of energy savings for the nation.

B. Plastic Ban and going for adoption of Green products

Plastic has just been in existence for the last 60 years but in that time it has become an integral part of our daily lives , right from cooking, clothing , retailing it is involved in every aspect. One advantage is that they are long lasting. The usage of plastic has grown multifold and in rapid manner, it has become an integral part of our daily lives. However the reckless usage and disposal has created a vast amount of wastage in the ocean. The below Fig 2 & Fig 3 depict the total plastic wastage and the life of some plastic items.

How much plastic is there?

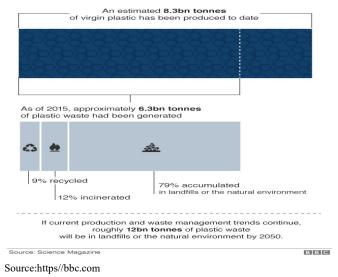


Fig 2 The levels of plastic waste in Oceans

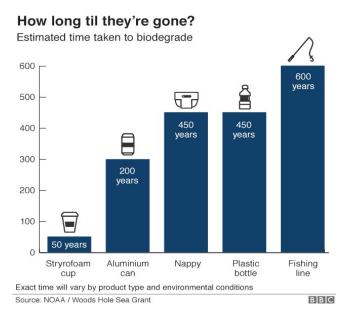
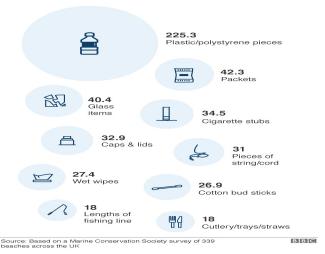


Fig 3 Bar chart showing the life of plastic items

Mostly the plastic items end into the sea which have the danger lurking for them , sea creature like Sea Birds, large marine creatures like Turtles, Dolphins, Seals lie in danger of being entangled in them. The plastic waste which if consumed by any sea creature can cause blockage and death , an incident just afresh in the news is of 28^{th} May 2018 where a whale fish stomach was foundto be filled with 80 shopping plastic bags & other waste on shore in Thailand. The analysis tests showed that due to the waste filled in the stomach he was starving and not eating which led to its death. The recklessness in plastic usage and disposal is alarming, which if continued will definitely create a major catastrophe on the planet. Fig 4 depicts the plastics found on UK beaches.

What kind of waste appears on UK beaches? Items found per 100m



Source:https//bbc.com

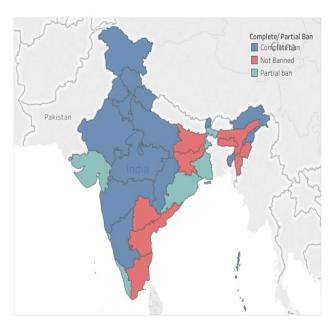
Fig 4. The levels of various plastic waste on 100m stretch of UK beaches

1): Steps on plastic ban — On June 05,2018 World Environment day , Indian government pledged to ban all single use plastic by 2022 during the World Environment day summit in New Delhi , a move which was welcomed by UN Environment with it's chief Erik Solheimmentioning that India was providing Global leadership where rest of the world was falling short.

India generates around 15000 tonnes of plastic waste every day , 9000 tonnes of this waste is collected and processed whereas remaining 6000 tonnes find littered on streets, drains or are dumped in landfills as per January 2015 report from Central pollution board of control .

The plastic additives from landfill can cause considerable pollution problems by contamination of soil, water sources etc. Hence India has taken this step in the larger interest and now there is complete ban on plastic in 20 states and partial ban in 5 states.

Status Of Ban On Polythene Carry Bags, By State



Source: https://indiaspend.com

Fig 5. Plastic ban status in India across various states

Although the ban has been imposed people still are to get an alternative for it as they are used to years of plastic items which made their life easy and also the ban has to percolate till the last mile in every state.

Government agencies should run campaigns all across the geography in order to make people at large aware of the dangers of plastic usage by running print, social media, TV advertisement etc.

Key pick -

This gives an opportunity for the manufacturers offering Eco friendly product to have an advantage. While government agencies can conduct campaigns to make general people aware of the hazards of using the plastic and disposing it recklessly these eco-friendly products manufacturing companies can promote their products with the benefits it offers and also informing how every citizen by using it can contribute to the betterment of the environment at large.

A company Greendiamz Biotech ltd, manufactures biodegradable products to be used in daily life, the company offers biodegradable Garbage bag rolls, flower pots, Draw string bags, Food trays etc. It offers these products made from Biolice – using process which is unique in compostable market from wholesale grain. Their products are made from maize ,corn grown in volcanic soil in the region of French Limigains , the corn , maize is non edible and products made from these are 100% biodegradable and tested for compostability as per ASTM, EN and IS /ISO norms.

Another firm Ecosac brand makes bags from parachute fabric which are used for various purposes like Home utility, Travel utility, Sports utility etc. These are sturdy, long lasting and reusable thus reducing the dependence on plastic for various purposes.

The usage of such products from manufacturers offering bio compostable products should be encouraged as well as educating the current manufacturers of plastic to convert into manufacture of bio-degradable products so that the pollution can be considerably put under control, and also it will help to achieve the goal of making India full plastic free by 2022 as envisaged during the world environment day summit on 5th June 2018.

C. Cochin International Airport:

Indian government has a target of 100 GW of Solar power generation by 2022.

Cochin International Airport (CIAL) can be considered as abenchmark towards it.

It is the 1st airport built under the PPP model and is the 1st airport in the world to be completely operating on solar power. On 18th August 2015, 12Mwp solar power plant was inaugurated by the then Hon. Chief Minister Mr. Oommen Chandy as a part of go –green initiative, it comprises of 46150 solar panels laid across 45 acres near the cargo complex.

The 50,000 to 60,000 electric units generated per day by the above are consumed for operational functions thus making it free from power grid, thus reducing CO2 emissions &preventing environmental degradation. However it is adhering to the green initiative since March 2013 when it installed 100 kwp Solar PV plant on roof top of arrival terminal. On the success of 100kwp Solar PV plant it next built & installed 1mwp Solar PV power plant partly on roof top and partly on ground in aircraft maintenance and hangar

facilities. Both plants are equipped with SCADA systems which enable remote monitoring

1): Achievement-Due to the adoption of solar power for operational purposes it has saved up to 550 MT of CO2

The plant produces 18 million units of power from Sun annually which is equivalent to the power feed of 10,000 homes for 1 year.

In the next 25 years due to the Solar power facility it will avoid CO2 emissions equivalent to Coal fired power plants by more than 3 lakh metric tonnes which is equal to planting of 3 million trees.

Key pick-

Living in growing global warming and energy deficit world, solar is to be considered as a mandatory component of global energy profile. Taking cue from Cochin International airport as an example for sustainable progress, airports across the nation can utilize their free space or open roof tops to build Solar power plants.

They can adopt Build-Own-Operate models for these plants thus reducing or completely eliminating electricity bills, become power self-sufficient and perhaps feed power to grid if required and also look at illuminating residences & other establishments alongside thus contributing to the environment and energy savings. Herein companies into conserving energy & building solutions can play a crucial role thus benefiting them as well as the environment at large.

D. Go-Green in Airline industry

Airline industry produce about 3% of world's emissions and that is predicted to increase by 2020 as per world trade organization.

As many of the business have turned green & people at large being aware of green initiatives, airlines are also involving eco-friendliness into their business practice.

Alaska Airlines was the 1st Airline to fly a commercial flight during Nov'2016, it used in part forest residual bio fuels. The bio fuel was made from parts of trees that are left after environment friendly logging was done.

Japan and Air New-Zealand have conducted tests with fuels extracted from jatrophaflowers.

The changes are also made on board as well, Virgin Airlines has partnered with Sustainable restaurant association to ensure that 5.5 Million meals served on board per year are meeting the norm of humanely farmed meat and reduced de-forestation risk food.

It has also cancelled from its menu, foods that cause deforestation like soy, palm oil and beef and does not serve it, The sponge from the headset is recycled to surface the equestrian centre while disused plastic on board is recycled and repurposed into benches.

Vistara in India is the only airline in India to offer Oxobiodegradable cutlery and plans to reduce the consumption of plastic by 50% in one year.

Thus such green initiatives should encourage the travelers to adopt Green products as well, airlines can contribute by spreading awareness of the eco-friendliness importance on board to millions on passengers who travel which should encourage them to have green items in their own consumption as well.

VII. CONCLUSION

While the above just highlights some aspect of the current scenario in respect of the environmental responsibility for businesses & how Green Marketing can contribute to a safe environment a lot needs to be discussed, and it is an apt time to follow it.

The adoption of Green Marketing can reduce the emissions and make environment a healthy one, however it needs to be imposed upon businesses as a rule to be followed rather than a fad or some making a style statement which shall diminish in time. Beyond adoption their also lies the responsibility on businesses to educate the consumers about the benefits of Green products and how they can make this world a better place by using those.

Further to it no matter how many world seminars& conferences by Government or Pollution control bodies be held, or no matter how hard the business houses try to educate the consumers about Green products, it's the consumer's ultimately who are accountable for a better environment, the consumers should take a self - vow to use Green products, commute in Green transport like E-vehicles or CNG-Vehicles, avoid air, water polluting products, adopt energy efficient, water and other natural reserves conserving products for a healthier tomorrow for the rest of our lives, for our next generation and for an healthy existence of this planet.

Hence the consumers if start demanding Green products then the businesses shall be compelled to adopt Green Marketing and thus it shall be a perpetual norm than just being a mere fad which shall fade away in time.

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