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Green Technology: A Contribution to Sustainable Development in India

Dr. M. Jayalakshmi¹, M. Mahalingam²

¹Assistant Professor, Dept. of Commerce, SKSS Arts College, Thiruppanandal, Tamilnadu, India.

²Associate Professor, Dept. of Manufacturing Engineering, Annamalai University, Chidambaram.

Tamilnadu, India

jayasiva15@gmail.com¹

Abstract

Green technology is a system that uses innovative methods to create environment friendly products. It is an environmental friendly technology developed and used in such a way that it doesn't disturb our environment and conserves natural resources. Green technology is developed in such a way that it protects the environment. This research aims to elaborate green technology and related terms along with how it would be helpful in the sustainable development.

Keywords: Green technology, sustainable development, environment.

1. Introduction

Green technology is a term which has been recently introduced and the main idea is to create new technologies which are environment friendly. Energy efficiency, recycling, health and safety concerns, renewable resources are the factors that contribute to green technology. The aim of adopting green technology is reduce damage to the environment, birds and animals and plants as well as damage to the world in general. It is also referred as clean technology. It is safe for use and promotes a safety and healthy environment. The purpose of this technology is to reduce global warming and green house effect.

2. Importance Of Green Technology

Green technology is an environmental technology that is mainly adopted to protect the environment and conserve resources. As it is the part of the renewable energy branch of the environmental technology movement, the importance of green technology cannot be ignored. By developing green technology we can reduce the damage caused by the pollution and other factors that affect the environment and animals. Its aim is to reduce the degradation of the environment. As the environment is full of pollution and hazardous

there is an urgent need for to adopt the green environment before the things get worsen.

3. Goals Of Green Technology

The main goals of green technology are

- 1. Sustainability-** Meeting the needs of the future without damaging or depleting the natural resources.
- 2. Source reduction** – The wastes and pollution to be reduced by changing the production and consumption patterns.
- 3. Innovation** – Developing alternative to technologies to prevent further damage to the health and environment.
- 4. Viability-** Economic viability of technologies and products that benefit the environment and truly protect the planet.

4. Objectives of Green Technology

The following are the objectives analyzed through this study- Green technology: A contribution to Sustainable Development in India

1. The concept of green technology is defined and analyzed.
2. To analyze why green technology is necessary?
3. To study the various hindrances and barriers of green technology.
4. To know how technology contributes towards

India's green sustainability.

5. Research Methodology

As primary data was not possible during this covid-19 situation, only secondary data were collected from different authentic journals, reports, search engines, company websites and scholarly articles, research papers, and other academic publications related to green technology.

6. Concept Of Green Technology

The concept of green technology is emerged and developed to protect the environment and preserve the natural resources. The main goal of green technology is to reduce the fuels, waste, energy consumption and wastage of materials and clean water, creation of products which are reusable and recyclable and contributing towards sustainability.

Its important goal is to reduce the adverse effect of human activities and conserves the natural environment. Green technologies

in present scenario plays a vital role in nation's economic growth towards sustainability in the present and as well as future to enable a clean and healthy environment. Going green makes the environment non toxic and environmental friendly and does not pollute as it is necessary in this present situation to protect the environment.

7. Major Sectors Of Green Technologies

1. **Energy Sector:** Green technology is applied in energy extensive industries such as iron and steel, cement, pulp, paper, and other. Green Technology can be applied in all sectors of energy consumption and energy demand management programs.

2. **Building Sector:** Green technology plays a vital role in building sector. It makes the building more energy- efficient and sustainable. Many aspects of the building construction is entrusted to be chosen as sustainable and energy- efficient as far as possible.

3. **Water and Waste Management Sector:** Green Technology is used in the management of water and use of water resources by recycling them by cooling the plants, construction of buildings and concrete mixings.

4. **Transport Sector:** Green transportation is used for reducing the damage of environment from the vehicles of car, bus and public road transport. The vehicle users can shift their focus from fuel to green cars.

8. Benefits from Green Technology Adoption

Green technology offers a lot of benefits like recycling, purifying of water, air, conserving energies and protecting the ecosystems. Green technology does not emit any harmful pollution into the air and protect the environment and preserves the natural resources. By adopting green technology the global warming effects can be minimized by reducing CO₂ emissions. By focusing on this type of production, the company can reduce the input costs, energy costs and operating and maintenance costs, which can increase a company's competitive position. In order to minimize the degradation of environment the concept of green technology should be adopted.

9. Top Green Companies Of India

India is making rapid progress in industrialization. Many companies have voluntarily come forward to preserve the ecosystem and have taken a greener approach towards success. The top green companies in India:

LG

LG India, a pioneer in making electronic eco-friendly gadgets, has recently launched a LED E60 and E90 series monitor to be supplied in the market. Its USP consumes 40% less energy than LED monitors and an attempt is made to reduce the use of dangerous materials in their products.

Samsung

Samsung India produces a wide range of LED TV screens and has recently introduced eco- friendly LED backlight that consumes very less electricity (40%) without harmful chemicals like mercury and lead.

Tata Consultancy Services

TCS was recognized as world's Greenest Company for its sustainability practice. It has a score of 80.4% of global score towards developing the green technology for environmental benefits.

Oil and Natural Gas Company

ONGC is considered as one of the largest oil producer in India, has initiated changing of the manufacturing techniques of green crematoriums that can perfectly replace the devised pyres that reduce the emit of smoke and consume a large amount of oxygen.

IndusInd Bank

It is first bank in India to oppose the use of paper for counterfoils in ATMs and started sending electronic messages, which as lead to the

contribution of saving paper and reducing deforestation.

Wipro

Wipro not only contributed to developing technologies that are effective in energy saving and wastes prevention but it's headquarter in Pune is the considered as most eco-friendly and green building in this sector all over India.

MRF Tires

MRF has introduced the ZSLK series to develop and produce eco- friendly tubeless tires made from unique silica-based rubber. It also offers extra fuel efficiency to those who use their vehicles.

10. Barriers In Green Technology

1. The initial investment and the implementation cost of green products are very expensive when the demand for that particular product is low.
2. The concept of green technology is not that familiar, the consumers are not aware of this technology.
3. As the consumers are not aware of the technology, awareness has to be created to implement this technology.
4. Green technology is a time consuming process as it takes time to adapt to green lifestyle.
5. There is no proper training to implement this technology.
6. The consumer does not live close enough to a facility of recycling to renew their used components of anything. Therefore, it ends up in the trash.
7. Alternative process technology is not known.
8. The information about green technology innovation and its implementation is lacking.
9. Only with certain conditions Green technology has proven to work.

11. Policy Requirements In India

Government of India should establish a Green committee to make the people aware about the concept of green technology, green buildings, green transport and recycling of waste management sectors. The government should make necessary steps for the progress of green technology to save the earth and improve our lives. Policy should be framed to increase the research funding for the universities and increase the scholarships for students pursuing studies in green technology disciplines at both the undergraduate and graduate stages. Necessary Policies should be framed to

design and implement green applications for low power, high implement and smart applications like smart economical cars, smart online parking systems reduce use of papers, conduct energy savings in transportation by using public transport.

Conclusion

Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The protection of environment, conservation of resources and other economic aspects are essential for sustainability of an environment. Now a day the consumers are demanding more of green products to preserve the environment, birds and animals and this enable them to lead their lives greener with less pollution. In this paper an attempt is made to analyze the concept of green technology and how the consumers slowly adapt to the changing the hazardous environment to an eco- friendly green technology in India.

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