

# Green Logistics

## Abstract

In today's highly competitive environment, green logistics issues are gaining high attention. Since it is an important part of supply chain management and plays an important role in the improvement of transport system. Logistics facilitates in getting products and services as and when they are needed and desired to the customer. It enables growth of trade and commerce in an economy because it is helpful in economic transactions. Sustainability is emerging as a salient concept with increasing importance. Since logistics is a core element in enterprise activities, sustainability is becoming a strategic issue for the logistics sector. Enterprise sustainability is only possible if natural, economic and social aspect is sustainable. This article investigates the issue of green logistics and the environmental impacts it creates and also analyses how logistics managers could lead the initiative in this area by incorporating environmental management principles in to their daily decision-making process so that sustainable development could be achieved.

Production, Recycling, Sustainability.

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## Introduction

For the purpose of meeting the customer's requirements the process to plan, implement and control the effective flow of cost and storage of raw materials, work in process goods, finished goods and information related from origin to consumption.

India is a major emerging market that has a young population, rising investment rates, large domestic demand and globally competitive firm. It is predicted that India will become the third largest economy by the year 2025 after China and the USA. The transport and logistics sector are fundamental to the development of a country, especially so in India where it is estimated to provide employment for 45 million people.

The economic growth in India has increased the demand for practically all transport services and further underlines the importance of providing an efficient logistics infrastructure in India. The Planning Commission of India has stressed that focus needs to be given to integrated transport solutions in preference to individual transportation and distribution services. The rising attention to the greener solutions doesn't leave logistics aside because it plays a very important role, as it is one of the main pollution sources and resource user. This article analyzes the state of art of green logistics, which still constitutes an unexplored field.

## Green Logistics Operations

### Green Purchasing

Green Purchasing refers to the procurement of products and services that have a reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison can consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, and disposal of the product or service. Green purchasing is also called as eco-procurement, green procurement, environmental preferred purchasing, and environmental responsible purchasing.

### Green Production

Green production is a business strategy that focuses on profitability through environmentally friendly operating processes. It is defined as the implementation of preventative environmental management strategies in a manner integrated in the production process, the elimination of the risks on human health and environmental values and the improvement of efficiency. The idea of producing goods and services with less waste has entered the business world with the name "green production noted that the energy expenditure of lighting during production is excessive.



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**Green Transportation**

Green Transportation or sustainable Transportation includes those modes of transportation that does not depend on diminishing natural resources like fossil fuels. These transportation modes rely on renewable energy sources. They also have very low impact on the environment as these modes produce minimal or no greenhouse gas emission. Distribution is managing the movements of all the materials in the value chain from the beginning to the end. Through green production, the damage to the environment will be brought down to the minimum, while all business costs are being reduced and profits will be increased. Transportation vehicles are among the most important factors endangering the environment. The factors affecting green distribution are the fuel used by transporting vehicle, frequency of trips, distance to the clients and other characteristics of hauling, such as materials, shapes and weight, recyclables of packaging for the reusability of containers, the use of materials that are harmless to the environment in packaging and the utilization of environmental management methods. With the advancement of globalization, distances between distribution points are increasing. Longer distances of transportation lead to increased carbon emissions for vehicles. Highway transportation is in the position of the highest greenhouse gas source.

**Short-Term Distribution Strategies**

1. Daily activities must be supervised by environmental factors.
2. Utilization of lifecycle analysis to determine the environmental effects of the distribution strategies.
3. Programs must be developed to review and observe the environmental performances of distribution functions.
4. To establish feedback channels local groups must be contacted about environmental and other social problems.
5. Accountability of uses of energy and materials in distribution activities.
6. Focusing on the reasons for ill-performing environmental activities.
7. Employment of environmental criterions and principles in transportation and general purchasing strategies.
8. Developing program for managing the environmentally hazardous materials.
9. Initiation of high-level educational training programs about environment.

**Long-Term Distribution Strategies**

1. Analyzing all future activities to utilize environmental effect.
2. Development of transportation networks for awareness.
3. Developing active plans to track legal procedures and drivers so that they can be trained and educated to lower maintenance costs.
4. Financial savings must be affected through efficient use of fuel.
5. Establishing good relations with internal and external stakeholders.

**Green Packaging**

Ecological packaging is the second name of green packaging. It is the method of packaging using materials totally made up of natural plant material to be recycled and reused throughout the lifecycle, value human health, animal health, and environment. Size of package, shape of the package and its use of eco-friendly materials should be considered for green packaging. Packages manufactured in that manner reduce the use of materials, enable efficient use of space in warehouses and decrease the amount of transportation needed.

**Reverse Logistics**

Reverse logistics is the recycling of unwanted materials (waste materials, boxes, bottles, papers, etc.) and repurposing them for production, and the utilization of returned or faulty products by sales through different channels. Thus, it is the reuse of products, reduction of resources, recycling, continuance of and reuse of materials, elimination of waste, fixing and re-manufacturing. It plans, implements and controls the efficient flow of raw materials, semi-completed or final products and the relevant information from the point of consumption to the initial stages, in a manner to ensure adding values and proper disposal.

**Applications of Green Logistics**

It is gaining importance day by day in most businesses. However, green logistics activities are thought to increase costs. Some studies shows that green logistics applications add to the costs of investment, operations, training and purchasing of environmentally-friendly materials, but reduce the costs of storage, inventory, transportation and energy consumption. In addition, the preference of environmentally-friendly materials improves the institutional images of businesses and lead to consumer satisfaction.

**Reasons for Businesses Switching to Green Logistics**

1. To increase consumer awareness on sustainability and social responsibility.
2. Enter new markets with certificates received to become green,
3. Making a transition to the preferred-business status and alleviate the consumer pressure.
4. Improving the qualities and efficiency of services, products, processes and supplies,
5. Managing the effects on the environment by applying original procedures for service and production systems and operations,
6. Expecting rapid technological developments is also in the domain of green technology,
7. Rising costs of energy, increasing scarcity of resources and the interruptions resulting in higher costs,
8. Increasing online sales and establishing a presence in new distribution channels,
9. Increasing energy usage due to immigration and the growing importance of energy efficiency projects,
10. Designing products according to environmental needs to create a difference in products.

**Aim of the study**

To investigate issue of green logistics and its impact on environment and managerial initiative in this field.

**Conclusion**

In today's era, there is competition between logistics strategies and the products and services they offer in the markets. Thus, green logistics aims at realizing business strategies in an environmentally-friendly manner to provide competitive advantages for businesses. The operations that will provide social, economic and environmental sustainability closely relate to the logistics sector. An effective strategy for sustainability minimizes the harms on the environment. In the context, businesses should

1. Transporting their products in larger bulks.
2. Utilizing environmentally-friendly and efficient transportation and distribution systems.
3. Training of personnel.
4. Informing clients and consumers.
5. Encouraging reverse logistic programs.
6. Stop using aged vehicles.
7. Preferring environment friendly technologies.

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