

Sustainable Logistics

“Sustainable Logistics and Supply Chain” is an evolving concept in the world of logistics practice that can be described as an integral transformation of logistics strategies, structures, processes, and systems towards a more rational and effective use of resources in supply-chain activities, ranging from the supply of raw materials to the transformation processes, the storage, the packaging, the distribution and the management of the end of the lifecycle of products. Sustainable logistics is becoming more and more relevant in the transition from a linear economic model (based on extraction, transformation, distribution and consumption cycles) to a circular model of economy, whose main goal is to extend the products life and rationalize the use of resources over time.

Sustainability is made up of three pillars: the economy, society, and the environment. These principles are also informally referred as “the 3 Ps” - Profit, People and Planet. By finding a balance among them, logistics can provide the best service while still enforcing and assuring a more conscious resources use.

Green logistics applies a three-dimensional life cycle approach, as opposed to the traditional one-dimensional, economics only focused approach. Following the three-dimensional approach does not necessarily mean that the level of effort and times will increase by three. However, as the organisation reduces its impact on the environment and support positive social behaviours, there may be a return on overall “value for money.”

Pillar	Types of effects
Economic	<ul style="list-style-type: none">• Economic regeneration• Sustainable economic development• Development of Environmental Management Systems• Total cost of ownership and life cycle costing• Value for money• Poverty reduction
Environmental	<ul style="list-style-type: none">• Environmental resource management• Urban planning• CO2 reduction• Alternative energies: e.g.: solar, wind• Water management• Sustainable agriculture• Marine resources management• Protection of ecosystems• Pollution and waste management

Pillar**Types of effects****Social**

- Human rights
- Clean drinking water
- Food security
- Fair pay and labour law protections
- Anti-child labour and forced labour laws
- Fair trade
- Health and safety
- Gender equality including universal education
- Child mortality and maternal health
- Healthy lives and well-being for all

World Bank - Sustainable Procurement (2019)

There is a wide range of initiatives to make logistics as green as possible, and each organisation should evaluate its own goals, capacities and plans to achieve them.

Best practises exist that allow a more sustainable balance between economic, environmental, and social objectives. These might include:

Area of Activity	Actual Situation	Steps to Improve	Benefits
<u>Transport</u>	Fleet causing high amounts of pollution, air quality reduced.	Measure the movements, costs and maintenance of transport to gather data about their use. Invest accordingly in proper maintenance depending of the needs and the selected strategy. This might include: redrawing shorter routes, investing in green vehicles, etc.	Lowered emission transport units, well maintained and following repair plans that reduce environmental and economic cost by increasing the efficacy.
<u>Distribution</u>	Distribution channels not well organised or with big inefficiencies.	Plan supply chain and procurement taking into account the cost to manage the waste produced. Effectively connect places of production with the distribution points, including using proximity to storage/distribution points as a selection criteria. Assess the production line or third level distribution channels of your suppliers for waste or misuse.	Faster deliveries, increased flexibility for late requests, and time savings on managing waste.

Area of Activity	Actual Situation	Steps to Improve	Benefits
Procurement	Price based selection that potentially hides unethical or not environmentally friendly activities.	Create and apply selection criteria that matches the ethical and environmental policies of the organisation. Research initiatives that other organisations are putting in place and adapt them to your situation.	Reputation increase.
Storage	Product loss by degradation caused by poor storage condition, or damages during in-storage movements.	Make improvements in the infrastructure to facilitate cargo movement. Use solar light and natural ventilation. If the infrastructure is going to last more than two years, invest in solar or wind power sources and manage your power consumption. (Power Supply section).	Save money and time.
Packaging	Excessive use of non-biodegradable materials.	Choosing the appropriate mode of transport with enough time, to be able to understand how the cargo is packed and labelled. Try to find a good compromise between safety and handling; Reduce packaging or/and use reusable or biodegradable materials. Example - corrugated cardboard and other forms of paper-based packaging.	Resources saved.

The WREC Project

Protecting the environment is especially important in humanitarian sector; environmental degradation - due to conflict, natural disasters - is a cross-cutting issue and requires a coordinated intervention to make sure that life-saving activities today don't have unintended impacts that need cleaning up tomorrow. Recent studies on environment in humanitarian action have consistently identified logistics as a stage of supply chain where the risk of unintended impacts is high and where there is a need to [embed environmental expertise to identify scalable solutions](#). To this end, the Global Logistics Cluster with the support of a coalition of humanitarian organizations - Danish Refugee Council (DRC), the International Federation of Red Cross and Red Crescent Societies (IFRC), Save the Children International, and the World Food Programme, set up the Waste Management Measuring, Reverse Logistics, Environmentally Sustainable Procurement and Transport, and Circular Economy (WREC) Project to produce harmonized guidance on waste management and greenhouse gas emissions, increase knowledge and awareness in the humanitarian community about green logistics, and support practitioners in environmental impact reduction, with a special focus for sustained field-based solutions.-

The [WREC Project](#) is bringing together humanitarian partners, the private sector, and academia to make sure that today's life-saving activities don't have unintended environmental impacts that need cleaning up tomorrow. As part of this, the Global Logistics Cluster plays an active role in coordinating and collaborating with those leading complementary initiatives to ensure that

this information is both available and contextualized for field-level practitioners' use. You can access the WREC platform [here](#) to learn more about the most recent initiatives in humanitarian logistics and find useful guidance to reduce the environmental impacts associated to humanitarian logistics operations.