

Committee: Environmental Committee  
Topic: The question of environmentally sustainable transportation systems



<b>Committee:</b>	Environmental Commision
<b>Issue:</b>	The question of environmentally sustainable transportation systems
<b>Written by:</b>	Beckett McDowell
<b>Position:</b>	Chair

---

## Introduction

Transportation control our daily lives and is unavoidable in both rural and urban settings making the importance of the development of environmentally sustainable transport. In the United States, 28% of carbon emissions come from transportation systems (Sources). Entrepreneurs and world leaders have acknowledged the importance of reform of systems. This is primarily through the implementation of renewable fueled vehicles and the growth of the mass transit industry.

All the way from Nairobi to Portland new mass transit systems are being introduced in order to alleviate heavy traffic and create a greener means of transport. Systems like the London Underground are 100% electric and have no direct carbon emissions aside from the source of energy which may not be sustainable. Additionally, schemes to increased walking and cycling have proved importance with cities like New York transforming their roads to be more hospitable to cyclists. This has resulted in a large spike in cyclists in the city, thus reducing the carbon footprint.

# Definition of Key Terms

## Carbon Footprint

the amount of carbon dioxide or other carbon compounds emitted into the atmosphere by the activities of an individual, company, country, etc. (Carbon Footprint)

## Mass-Transit

a system of large-scale public transportation in a given metropolitan area, typically comprising buses, subways, and elevated trains. (Mass Transit)

# General Overview

Ever since the creation of the first car the world of transportation has been dominated by gas-guzzling machines that pollute our atmosphere. Efforts on sustainable transport have been championed by local governments around the world rather than national governments giving these initiatives a grassroots base, showing how local communities care about their environment. This has been seen the massive growth in the implementation of bike share programs as seen in figure one.

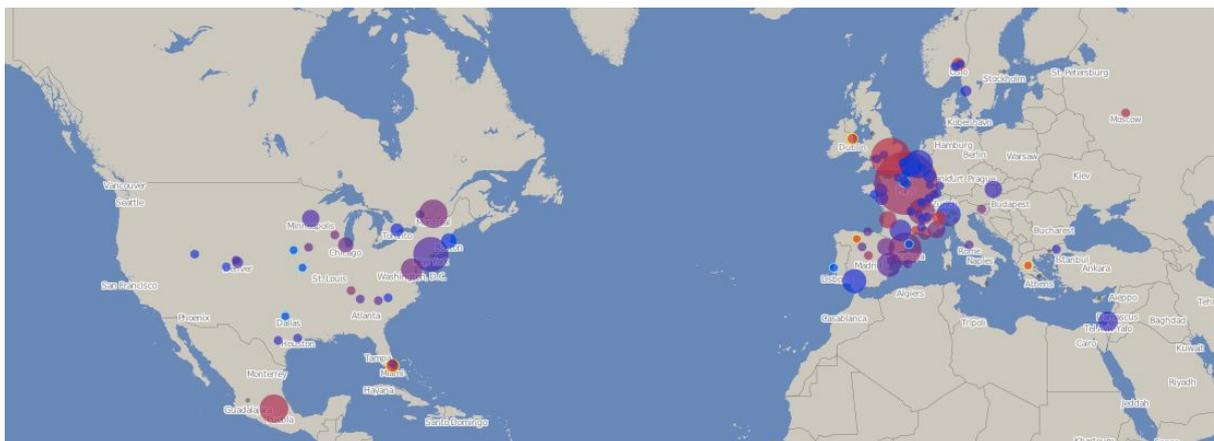


Figure 1, Map of Bike Share Programmes. (Divvy)

This means that any development of sustainable public transport would likely be accomplished through federal subsidies and grants making it easier for local governments to implement systems into their own towns. This is needed due to the fact that programmes for sustainable transport are unique to the city that they are in. An underground system is typically more fitting for larger cities such as London or New York as the density of the city makes land scarce for stations above ground. Whereas in less densely populated cities an above ground tram network may be more affordable and feasible compared to the high price and risk that comes with boring tunnels.

The adaptation of tram networks has been revolutionary for cities around the globe due to their low cost and the ease of expanding their network. With cities such as Birmingham, U.K. with over 4 million residents opting for a tram network rather than a metro system like that of their rival city, London. Even mega cities like Los Angeles have opted for overground systems which are typically electric. The introduction of these electric based mass transit systems could be revolutionary in the realm of green transport and merits international intervention by the United Nations.

It is likely that cars and other automobiles have become so ingrained into some cultures that they will never disappear meaning that if the world is to be more sustainable there needs to be schemes and policies to have more green cars on the road. This has been done in different ways by various city, regional, and national governments around the world providing a vast array of options. Shanghai, one of the most populous cities on earth has made it allowed for its citizens to receive a license plate for no cost in the car is 100% electric compared to the cost of over \$14,000 for a license plate on a fossil fuel based car (Why a license).

In the United States and Norway, there have been large efforts to directly subsidize the purchasing of electric cars to where in some cases it can be cheaper to purchase a luxury electric car than to purchase a standard fossil fuel one. In California, the local government has offered a rebate (a return of part of the original payment for some service or merchandise; partial refund) of up to \$7,000 for the purchase of an electric car. The most famous manufacturer of these electric cars has been Tesla and its own Elon Musk. Through clever and playful marketing techniques the company has managed to become an iconic brand making electric cars more desirable. The latest car produced by the company, the model 3, received over 500,000 pre-orders in the first year after its release (Tesla saw about). This demand was enough to shake the car industry at its core and cause the whole sector to begin its pivot towards electric.

The United Nations has recognized the importance of greener transportation in its sustainable development goals. This is seen in goals 9 and 11 which state:

- Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

Despite the security council not making any concrete moves in the promotion of sustainable transport, the general assembly has passed multiple resolution simply encouraging governments to promote and encourage the development of better transport networks.

# Major Parties Involved

## Local Governments

Implementation of the systems is almost always in the hands of the governments which they most directly affect. That is why cities and other regional governments are those who need to be empowered to be bold in the creation of better networks. Whether it be, greener bus systems, electric car subsidies, tram systems, metro networks, or a bike share program. The fate of sustainable development lies in the hands of local communities.

## United States

The United States has the second largest carbon emissions on earth and has a responsibility to lead the charge in the fight for sustainable transport. Local governments have developed tram and bike share systems across the nation. In the last 10 years alone the country has seen the opening of 15 new electric light rail systems that will cut carbon emissions and alleviate traffic.

## China

In its ongoing battle to out-innovate the United States, China has begun building its own electric rail networks and bike-share programs. These bike-share programs have been a large failure with many of these bikes being thrown into landfills and never getting used. As one of the fastest growing populations on earth, it is important that the nation transitions well into the sustainable era.

# Timeline of Key Events

<b>Date</b>	<b>Description of Event</b>
<b>January 1st 2016</b>	Introduction of the Sustainable Development Goals
<b>May 1995</b>	First ever bike share system introduced in Copenhagen
<b>October 27th, 1904</b>	New York City introduces the first ever electric subway system (Britannica)
<b>Unknown Date 1897</b>	The first ever commercial electric powered automobile is introduced sold (Timeline:)

## Previous Attempts to Resolve the Issue

There have been no concrete attempts to solve the issue by the United Nations. This shows the urgency that nations act quickly and work towards solutions for better transport systems. Additionally, this is not a topic that is resolved in a day but rather one that is addressed by decades of innovation and research towards more efficient and green systems to get people from point A to point B.

# Possible Solutions

The best solutions are likely adapted or improved versions of the existing system. This act of recreating already existing systems is called “best practices” and will be highly necessary in order to solve the dire problem that is sustainable transport. Some listed examples would be.

- Bike-Share Programmes
- Electric Car Rebates
- Tram and Metro Systems
- Cleaner Energy Grids
- More Walkable Cities
- Subsidies and Tax Cuts for research and development of renewable transport industries

# Bibliography

Bhuiyan, Johana. “Tesla Saw about 63,000 Cancellations of Model 3 Preorders.” *Recode*, Recode, 3 Aug. 2017, [www.recode.net/2017/8/2/16087432/tesla-model-3-electric-car-manufacture-preorder-cancellations-elon-musk](http://www.recode.net/2017/8/2/16087432/tesla-model-3-electric-car-manufacture-preorder-cancellations-elon-musk).

Britannica, The Editors of Encyclopaedia. “Subway.” *Encyclopædia Britannica*, Encyclopædia Britannica, Inc., 31 Aug. 2017, [www.britannica.com/technology/subway](http://www.britannica.com/technology/subway).

“Carbon Footprint.” *Dictionary.com*, Dictionary.com, [www.dictionary.com/browse/carbon-footprint?s=t](http://www.dictionary.com/browse/carbon-footprint?s=t).

“Divvy: Helping Chicago's New Bike Share Find Its Balance.” *Data Science for Social Good*,

12 May 2018,

[dssg.uchicago.edu/2013/08/09/divvy-helping-chicagos-new-bike-share-find-its-balance/](https://dssg.uchicago.edu/2013/08/09/divvy-helping-chicagos-new-bike-share-find-its-balance/).

Goodyear, Sarah. “The Real Story Behind the Global Bike-Share Boom.” *CityLab*,

[www.citylab.com/city-makers-connections/bike-share/](http://www.citylab.com/city-makers-connections/bike-share/).

“Mass Transit.” *Dictionary.com*, Dictionary.com,

[www.dictionary.com/browse/mass-transit?s=t](http://www.dictionary.com/browse/mass-transit?s=t).

“Sources of Greenhouse Gas Emissions.” *EPA*, Environmental Protection Agency, 11 Apr.

2018, [www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions](http://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions).

“Timeline: History of the Electric Car.” *PBS*, Public Broadcasting Service,

[www.pbs.org/now/shows/223/electric-car-timeline.html](http://www.pbs.org/now/shows/223/electric-car-timeline.html).

“Why a Licence Plate Costs More than a Car in Shanghai.” *The Economist*, The Economist

Newspaper, 19 Apr. 2018,

[www.economist.com/china/2018/04/19/why-a-licence-plate-costs-more-than-a-car-in-shanghai](http://www.economist.com/china/2018/04/19/why-a-licence-plate-costs-more-than-a-car-in-shanghai).