

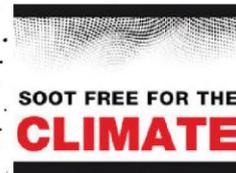
## Guideline **CONGESTION CHARGES**



Transport in cities comes with problems like congestion, noise or air pollution. Already for a long time cities have developed measures to reduce the level of traffic. Congestion charges have been discussed for a long time as a way to reduce urban congestion. Nevertheless, cities have remained fairly reluctant to congestion pricing. To this day only a few cities have adopted congestion charging zones. This paper discusses why congestion charges are advantageous and what cities should be aware of.

Congestion charging zones set a price for the permission to enter a given zone, usually a city's centre. By increasing the costs of entering that area, it decreases traffic and thus congestion, noise and emissions levels. And also, it creates revenue for the city. The basic assumption would be that in a city that suffers from traffic induced problems, setting market based incentives to reduce traffic would be an appropriate and

sensible approach. Since the millennium, cities like Rome (2001), Durham (2002), London (2003), Stockholm (2006), Valletta (2007) and Milano (2008) have introduced congestion charging schemes. In most of the European cities however, congestion charges were not introduced. What generally seems to be a good idea, in practice suffers from a few obstacles and issues. This paper tries to show and analyse that.



## Where does it make sense?

While congestion charges are connected to a series of positive effects their main benefit is the mitigation of congestion. Thus without actually having an issue with congestion, the city is advised to consider other measures. Congestion charges are large and rather complex systems and the costs for implantation and maintenance are relatively high. Without congestion issues, a city should not consider this measure and opt for alternative ways to achieve their goals. Cities that do experience high congestion levels are advised to have a look at it.

## Milan – Area C

Since 2012, Milan has declared the inner city area as “Zona a Traffico Limitato”. Cars are registered by video when they enter the area through one of the 43 entrance gates. The zone covers around 4,5% of the city. Between 7:30 and 19:30 (Thursday’s 18:00) cars have to pay a fee between 2 and 5€, which includes parking in designated parking spaces. It is combined with a Low Emission Zone (LEZ), banning EURO 3 and below from entering.

The goals were to reduce congestion and thereby air pollution as well as to promote sustainable transport. After a trial period it was permanently approved in March 2013. Total revenues in 2012 were 20.3 million €, after costs of around 7 million € the net earnings amounted to more than 13 million €. They were invested to promote sustainable mobility projects.

While in the CC zone traffic was substantially reduced, outside the zone, Milan still faces severe congestion problems. Environmental groups have acknowledged the positive effects of the zone and advocate for an enlarged zone.

## Milan – Congestion Charge Effects

- Cars entering zone -33%
- Road accidents -31%
- Public Transport Speed
  - Busses 3.5%
  - Trams 4%
- Black Carbon -30%
- CO2 -35%

## Advantages & Obstacles

The most important **advantages** of a congestion charging zone are:

- Less congestion.
- Source of income.
- Less noise and emissions.
- Increased average speed for public transport & traffic in general.

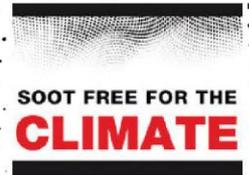
Public acceptance of the measure is largely based on aspects that determine the increased quality of life in the city.

Amongst the most important **obstacles** to congestion charges are

- Geographical conditions.
- Acceptability of the public and its politicians.
- Relatively complex system.
- Perceived high costs of implementation and maintenance.

## Success factors

- System should be manageable in the specific geographical situation of the city.
- Finding the right level of prices. In order to achieve a scheme that achieves a desired reduction in traffic and revenues for the city, prices have to be carefully calculated.



- How to deal with foreign vehicles, not covered by electronic system.
- Pragmatic system design.
- Strict enforcement.

A congestion charge is administered with vehicle recognition and a manual or electronic fee collection. Where in the past cities had to make costly experiences with certain design options for congestion charging zones, today there is a greater wealth of options and tested systems to learn from and to choose. Of course the system also needs strict enforcement.

### **Congestion charge and parking prices**

There is a need to consider congestion charge in relation to the parking prices in a city. The context of course matters greatly, but in principal both measures put prices on entering a given zone.

Both measures affect each other thus a comparison is helpful.

Parking influences congestion, thus where parking prices are relatively low, an increase could lower congestion to desired levels. Thus parking prices

### **Stockholm**

The city introduced a congestion charge as a trial period in 2006 and permanently in 2007. Journeys in the city area are subject to a fee varying between 1 and €2. The Stockholm inner city zone is active on weekdays from 6.30 AM to 6.29PM. As a result of the congestion charge incoming traffic decreased by 18%.

could substitute for a congestion charging zone. But this definitely is dependent on the amount of “through-traffic” that does not depend on parking. It is also very important to know, how much “searching for a parking spot” traffic there is.

Already applied relatively high parking prices would mean a double pricing with attributed losses due to inefficiency. In any case, parking would need to be revised in order to fit a newly introduced congestion charge.

### **Revenues**

Revenues can be substantial. A main factor for how beneficial the charge is for society is how these revenues are being used. How revenues are spend thus determines greatly the acceptance of the measure.

Transparency on how these revenues are used is crucial in increasing acceptance of the measure as well as its positive impact.

### **Final Words**

Air quality and greenhouse gases are important positive impacts of congestion charges. Less traffic and thus better air quality less noise and an increased overall quality of live all create acceptance for this measure. However, the number one argument of a congestion charge for its implementation is its revenues. Depended on the specific situation of a city, they are able to regulate the amount of traffic in a city and create significant revenues, which are ideally earmarked for sustainable transport.

### **Air pollution & Health**

In 2010, more than 400,000 people died prematurely in the EU due to air pollution. That makes air pollution the main environmental cause for shortened lives in the EU. The resulting health problems cost society estimated 330€-940 billion per year. Over 90% of the urban population in the EU is exposed to concentrations higher than the limit values recommended by the World Health Organisation (WHO). Among the most important pollutants are black carbon (BC), which is a part of particulate matter (PM), Nitrogen Dioxide (NO<sub>2</sub>) and ozone (O<sub>3</sub>)



## Further information:

International Transport Forum - Implementing Congestion Charges  
<http://www.internationaltransportforum.org/>

---

## CONTACT

Municipalities interested please contact us for further information:



Bund für Umwelt und Naturschutz Deutschland (BUND) |  
Friends of the Earth Germany

Arne Fellermann | Phone: + 49 30 275 86-484 |  
Email: [arne.fellermann@bund.net](mailto:arne.fellermann@bund.net)

---

## ABOUT US

Clean Air is a project by nine European environmental organisations that fight for clean air in European cities. Despite the existing legislative framework and the citizens' right to clean air, continuing violations of air pollution limits remain a problem in many cities. Air pollution threatens health, environment and climate. It's time to take action!

[www.cleanair-europe.org](http://www.cleanair-europe.org)

Started in 2009, the associated campaign "Sootfree for the Climate" aims to reduce diesel soot emissions, which accelerate climate change and pose a threat to public health. To this day twelve European NGOs have joined the campaign.

[www.sootfreeclimate.org](http://www.sootfreeclimate.org)

a project by



project coordination

co-financed by the  
EU's LIFE financial  
instrument



associated  
campaign

