Area C in Milan: from pollution charge to congestion charge (Italy)

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In brief

In January 2012 the city of Milan implemented the first congestion charging scheme, known as AREA C, in Italy. The AREA C system has been put into operation to replace the previous road charging scheme (ECOPASS) which was launched in 2008 and lasted until 2011. Citizens’ opinion was previously tested with a referendum in June 2011: almost 80 per cent of voters declared themselves in favour of more restrictive conditions than those under ECOPASS, if these restrictions could help in achieving a better quality of life in the city.

Context

Milan is the second-largest Italian city, capital of the Lombardy region and of the province of Milan. The city itself has a population of more than 1.3 million, while its urban area is one of Europe’s largest with an estimated population of over 4 million. It is spread over 1,980 km² with a consequent population density of more than 2,000 inhabitants/km². The overall mobility totals more than 5.3 million trips per day: 58 per cent are internal to the city area, while 42 per cent are trips between the city and its surrounding metropolitan area.

The city ranks third amongst large European cities in its atmospheric concentrations of particulate...
matter, both in terms of average annual level and days of exceeding the European Union PM10 limit of 50 micrograms per cubic meter. Milan has also one of the highest European rates of car ownership - one that is also among the highest in the world. Because of its air pollution problems and their associated health risks, Milan has launched several measures to try to deal with these issues, including an innovative congestion charge system, called Area C.

The congestion charge has replaced the previous pollution charge system, Ecopass, with the aim of accelerating the real improvement in quality of life for those who live, work, study and visit the city. The overall goals of the congestion charge - Area C are:

- to decrease vehicular access to the city centre and traffic congestion;
- to improve public transport networks;
- to reduce pollutant emissions caused by traffic and to reduce health risk related to air pollution;
- to increase the share of sustainable travel modes and to raise funds for its further development.

The area subject to congestion charge is called Cerchia dei Bastioni, and it is approximately 8.2 km² in area, or some 4.5 per cent of the whole territory of the Municipality of Milan. It has about 77 950 residents (42 300 families), with a density of 9 480 inhabitants/km². The area is very attractive because of the many activities and services located there: every day about 500 000 people travel into the area from elsewhere.

In action

The congestion charge Area C started operating in Milan on 16 January 2012 after the positive response of the referendum: the scheme is now in force every working day from 7:30am-7:30pm (with no charge on weekends and public holidays), but in the latest revision of the scheme a further free entrance slot has been implemented on Thursday evenings (the cameras stop working at 6pm instead of 7:30 pm in order to encourage weekday shopping activities).

The fee is € 5 for all vehicles. The payment allows users to travel for the whole day in the charged area. Residents have 40 free daily entries per year and from the 41st day on, they have to pay a reduced daily tariff of € 2. Special terms are applied also to registered duty vehicles (€ 5 ticket for entrance plus two hours of free parking, or a € 3 ticket for entrance only - with no parking facilities). Entrance is forbidden for gasoline pre-EURO and diesel pre-EURO, EURO1 and EURO2 vehicles.

Cars entering Area C are detected by a system of 43 electronic gates (of which seven are reserved for public transport vehicles), equipped with ANPR (Automatic Number Plate Recognition) technology. Data on environmental pollution are obtained from Environmental Monitoring Stations deployed in the city. The planning of the system has been encouraged since the start by the strong support and will of the city’s politicians (elected in 2011), who believed in the need for a transition to a more effective charging scheme, in order to tackle primarily problems of congestion. AMAT (Agenzia Milanese Mobilità Ambiente e Territorio), the Environmental Mobility Agency of the Municipality, is the entity responsible for planning, implementing and monitoring the impacts of the Area C system.

The net revenue generated by Area C, based on the first month's data, has been estimated at about € 23.5m of income for 2012, of which nearly € 11.2m was available at 30 June 2012. All the income from Area C will be reinvested in projects for sustainable mobility, as follows:

- New Park and Ride (Metro Line 3): € 3.8m
• Improvement of bike sharing system (2nd phase up to 200 stations at the end of 2012): € 3m
• Public transport (fleet renewal and increased frequency): € 10m

Results

Periodic reports on the impacts of Area C are made available on the City of Milan website. On the website citizens and city users are invited to report problems or offer suggestions through a public forum section. Further personalised queries may be carried out via a statistical section of the municipal website. An index of congestion, parking occupancy, numbers of Metro passengers, the speed of public transport, number of tickets sold and the number of fines issued are some of most important indicators that are processed.

After six months the outcomes (from January to June 2012) are as follows:

• Traffic average reduction: -34 per cent (46 133 fewer vehicles entered Area C);
• Traffic average reduction outside Area C: -6.9 per cent
• Reduction in the numbers of most polluting vehicles: -49 per cent (-2 400 vehicles entering every day the Area C);
• Increase of cleaner vehicles: +6.1 per cent (from 9.6 to 16.6 per cent of the total vehicles entering the Area C);
• Increase in public transport running speed: +7 per cent (bus) and +4.7 per cent (tram);
• Reduction in number of accidents: -28 per cent;
• Reduction of emissions of pollutants from traffic in the Area C 'Cerchia dei Bastioni': PM10 exhaust -19 per cent; PM10 total -18 per cent; NH3 -31 per cent; NOx -10 per cent and CO2 -22 per cent.

With respect to 2008, PM2.5 and PM10 have decreased, but what is most significant is the result related to the decrease in Black Carbon percentage which indeed is the most dangerous component of these emissions (it is not possible to state an average reduction value as it varies extremely in relation to site and time of measurements).

So, the congestion charge of Milan, together with other experiences elsewhere (London, Oslo, Stockholm and Singapore) which are based on the 'pay-as-you-use' principle, has become a reference point for those cities aiming to implement solutions for sustainable mobility and traffic regulation policies.

The Local Administration of Milan is also working on its new Sustainable Urban Mobility Plan (SUMP) by following the planning approach developed under the ELTISplus project and its EU Guidelines. The Local Administration has recently approved the document Guidelines for the development of SUMP.