

Climate Resilient Cities

A Primer on Reducing Vulnerabilities to Disasters

I/ CITY DESCRIPTION

The municipality of Milan has about 1,305,000 inhabitants, of which less than 8 percent live downtown. It is the second largest city in Italy, located in the plains of Lombardy. The Milan metropolitan area, depending on the specific definition, has a population ranging from 3.9 to 7.4 million.¹

The metropolitan district of Milan is located in the Lowland Padana in the west-central area, inclusive of the rivers Ticino and Adda, among the river Po and the first reliefs prealpini. With a surface of around 181 square kilometers, it is positioned 122 meters above sea level. The Olona River, the Lambro River, and the Seveso Creek run through Milan: Olona and Seveso run mostly underground.

An industrial, financial, and cultural center, Milan is an important city in the Region and Province. The city hosted the World Exposition in 1906 and will host the Universal Exposition in 2015.

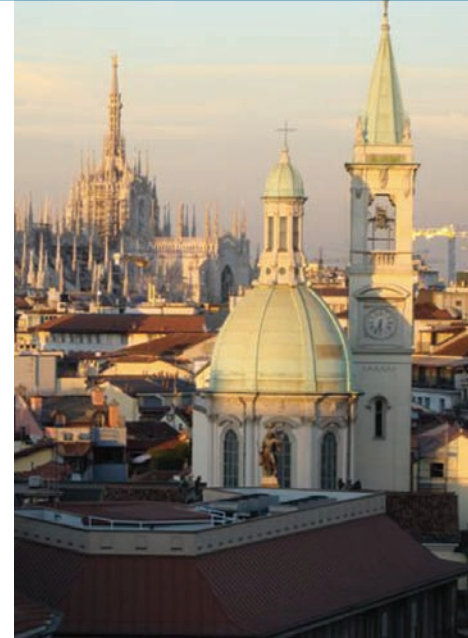
II/ PRIORITY HAZARDS/VULNERABILITIES

In past decades, Milan has had mainly atmospheric emissions problems, such as non-compliance with limits and traffic pollutants that are too high. For this reason, the city has focused mainly on mitigation policies rather than on adaptation.

The city started working on monitoring, accounting, and reporting pollutants during the past decades. Greenhouse gas (GHG) emissions in the Municipality of Milan in 2005 amounted to 5,803.47 kilotons of carbon dioxide (CO₂). This represents the sum of carbon dioxide equivalent tons of emissions from various sectors, such as agriculture, transport and mechanical sources, industrial and nonindustrial combustion, fuel extraction and distribution, manufacturing, power generation and transformation, road transport, waste treatment, and solvents.

The principal sources of emissions are the following:

- Domestic energy use, 54.4 percent;
- Transport, 28.7 percent; and
- Industry, 7.8 percent.



Milan plans to cut greenhouse gas emissions (GHG) 15 percent by 2012 and 20 percent by 2020.



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III/ MITIGATION MEASURES

Milan is committed to drastically reducing its emissions; using the year 2000 as a reference point, it plans to cut emissions 15 percent by 2012 and 20 percent by 2020. Milan's climate program focuses on cutting emissions from residential energy use and transport, yet it is also based on a programmatic approach that takes into account all the factors of producing, collecting, and absorbing emissions. Milan's strategy on carbon dioxide forms parts of a framework of measures designed to deliver an organic and programmed reduction of greenhouse gases, directed at the principal sources of emissions: household energy use and the transport sector.

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Measures by the Civil and Housing Section are aimed at reaching the European Commission Energy Efficiency Green Paper's target of a 20 percent reduction in prime energy consumption by 2020. The Municipality of Milan's Plan on Energy and the Environment aims to reach this goal through the redevelopment of existing housing and the promotion of more rational energy use by the general public. The Plan further lays down a target for the development and promotion of renewable and alternative energies within the public sector, both by the city and the public utilities under its control. Milan's goals are actually more ambitious than the current legislation requires.² The Mobility and Transport Section's activities are also closely aligned with the overall strategy on carbon dioxide, each individual measure being assessed in terms of its contribution to the Municipality of Milan's GHG targets.

Expo 2015

Expo 2015 is characterized by a profound concern for climate issues broadly and is driving a variety of innovative

policies and programs for Milan. The Municipality of Milan is promoting its own Climate Program specifically for Expo 2015. The Milan Climate Program includes a series of goals and actions that will be staged in three phases: experimentation, systematization, and offsetting. Milan not only intends to reduce emissions generated during the preparation, staging, and aftermath of the event, adopting mechanisms to offset these, but also to propose new mechanisms and experimental projects to generate emission credits, attract ideas, and export the best technologies or sound practices and skills to other countries.

The Municipality of Milan is promoting new initiatives compatible with the Kyoto Protocol (Joint Implementation and Clean Development Mechanism—CDM—schemes) to design and test genuine applications to be shared and implemented jointly with other European cities and developing countries. The experimental proposals of the Municipality of Milan go beyond the Kyoto Protocol, while maintaining the approach, time horizon, scale of commitment, and voluntary nature of the European Union scheme.

Through Expo 2015, "Milan will act as a reliable partner and a forward looking protagonist of international cooperation in the struggle to combat climate change and desertification. A protagonist capable of realizing projects directly and of informing and educating people here and in their own countries to develop these projects and establish a model and guidelines for new projects that comply with the Kyoto protocol."³ To this extent, Milan just signed a memorandum of understanding with the World Bank aimed at developing an innovative partnering program with developing countries. Milan will share knowledge, transfer clean technology (mostly through the companies and utilities active in the city and owned or partially owned by the Municipality), and build new projects and programmatic CDM. The credits (CER—Certified Emissions Reduction and Verified Emissions Reduction) generated from emissions reductions will help offset the Expo 2015 CO₂ emissions.

The Ecopass Project

The Municipality of Milan designed a pollution and congestion charge. Ecopass came into effect on January 2,

2008. It is designed to restrict access to the central *Cerchia dei Bastioni* area of Milan by charging the vehicles that pollute most heavily.

Ecopass Project⁴ aims to:

- Make the air cleaner by reducing particulate matter emissions in the Cerchia dei Bastioni by 30 percent, with a positive impact on the surrounding areas of the city as well;
- Relieve congestion by reducing the number of incoming cars by 10 percent and thereby speeding up public transport in the area; and
- Boost public transport by reinvesting all Ecopass charges in sustainable traffic and a sustainable environment.

Ecopass is meant to improve mobility and safeguard both public health and the environment. City officials believe that Ecopass will help to heighten awareness of the effects of human behavior on the environment and to build a more eco-friendly city for its citizens.

Network and Commitments

The Municipality of Milan is part of ICLEI (Local Governments for Sustainability), Slim Cities, Eurocities, the Clinton Climate Initiative, and other networks. It is one of the most active partners in the EU Covenant of Mayors. In the latter, the mayors commit themselves to several important targets on climate change. Among the commitments are emission reductions beyond the objectives set by the European Union for 2020 (reduction by 20 percent), adaptation of city structures, mobilization

of civil society to participate in the development of action plans, an annual accounting and reporting on GHG emissions, and experience and knowledge sharing with the developing world and other territories.

IV/ OUTCOME/IMPACTS

The most important outcome Milan wishes to reach through its Climate Change Action Plan is GHG emissions reduction. The city is focusing on mitigation activities, but is also building new partnerships and new programs (also through the World Bank) with developing countries; Milan is also open to adaptation programs.

Notes

This “City Profile” is part of *Climate Resilient Cities: A Primer on Reducing Vulnerabilities to Disasters*, published by the World Bank. The analysis presented here is based on data available at the time of writing. For the latest information related to the Primer and associated materials, including the City Profiles, please visit www.worldbank.org/cap/climatecities. Suggestions for updating these profiles may be sent to climatecities@worldbank.org.

¹ Municipal statistical data, 2008, available from the web site www.comune.milano.it.

² Law 311/06 and regional energy rules.

³ Expo bid documentation, Chapter 16, available from the web site www.comune.milano.it.

⁴ Ecopass Project documentation, available at www.comune.milano.it.



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