

Press Release

Cities key to reduction of carbon emissions and sustainable use of resources according to UN-HABITAT's new *State of the World's Cities Report 2008/9: Harmonious Cities*

With the urban population of the world set to escalate over the next few decades, it has become even more important to understand the role of cities in the area of climate change and in producing carbon emissions. As it is, cities generate a disproportionate share of a nation's gross domestic product which typically translates into high levels of energy consumption for industrial processes compared to non-urban areas.

Though, it is a well known fact that North America with a GDP per capita of US \$28,910 and 5.2 per cent of the global population, contributes 13.7 per cent of the global emissions in 2000, the rise of newly urbanizing countries such as China, and India make it even more critical to understand the contribution of cities to climate change. After all, North America, the European Union, Russia, China and India now contribute approximately 61 per cent of global emissions.

In 2007, China surpassed the United States as the leading emitter of greenhouse gases. This increase has been attributed mainly to increase in coal consumption and industrial processes. Chinese cities, such as Shanghai, for instance, produce almost twice the emissions of Tokyo or Seoul. China's emissions are also significantly higher than those of India, and reflect consumption patterns that have accompanied rapid economic growth and industrialization patterns that rely heavily on fossil fuel consumption.

To help understand the environmental risks and burdens associated with rapid urbanization, the new UN-HABITAT *State of the World's Cities report 2008/9: Harmonious Cities*, is dedicated to analyzing emissions at the global, regional and local level. Especially as urban growth, when not properly planned and managed, can easily threaten the quality of the air, the availability of water, the capacity of waste processing and recycling systems.

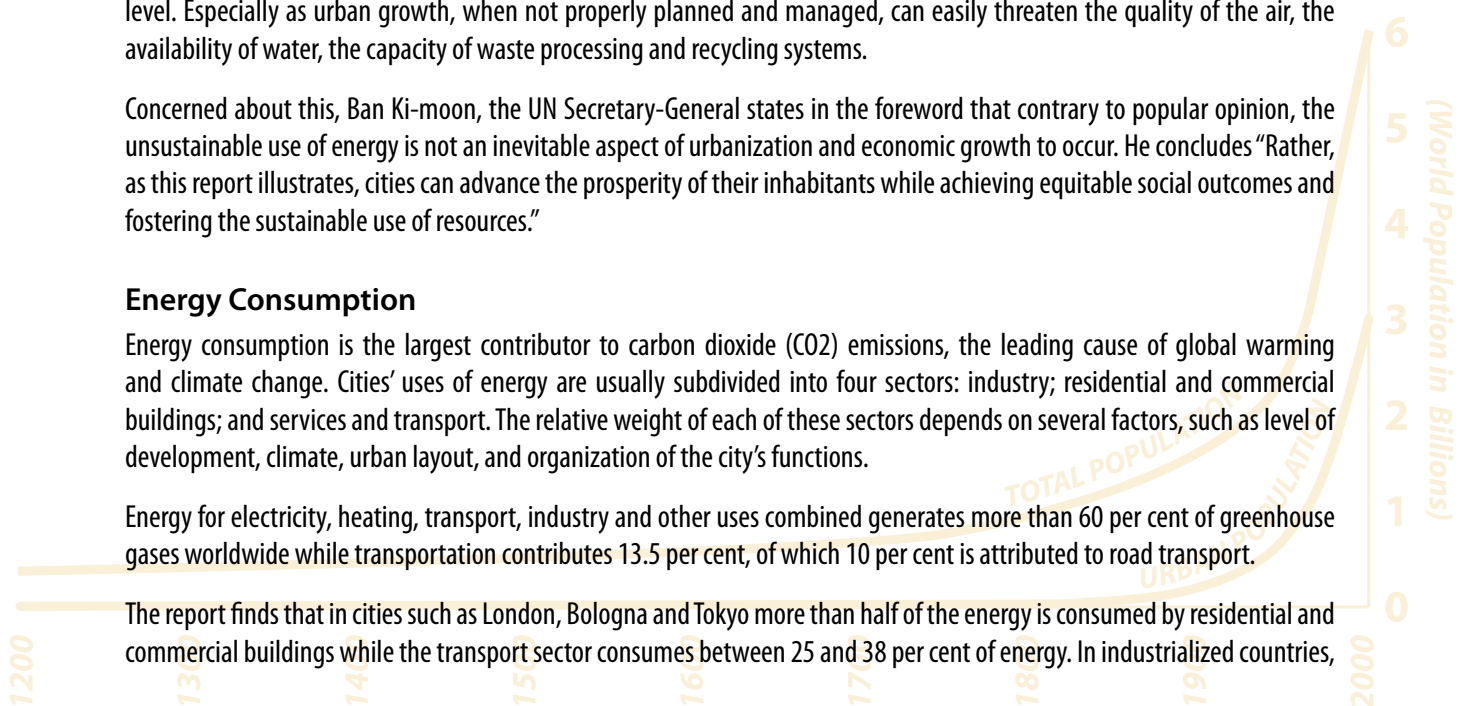
Concerned about this, Ban Ki-moon, the UN Secretary-General states in the foreword that contrary to popular opinion, the unsustainable use of energy is not an inevitable aspect of urbanization and economic growth to occur. He concludes "Rather, as this report illustrates, cities can advance the prosperity of their inhabitants while achieving equitable social outcomes and fostering the sustainable use of resources."

Energy Consumption

Energy consumption is the largest contributor to carbon dioxide (CO₂) emissions, the leading cause of global warming and climate change. Cities' uses of energy are usually subdivided into four sectors: industry; residential and commercial buildings; and services and transport. The relative weight of each of these sectors depends on several factors, such as level of development, climate, urban layout, and organization of the city's functions.

Energy for electricity, heating, transport, industry and other uses combined generates more than 60 per cent of greenhouse gases worldwide while transportation contributes 13.5 per cent, of which 10 per cent is attributed to road transport.

The report finds that in cities such as London, Bologna and Tokyo more than half of the energy is consumed by residential and commercial buildings while the transport sector consumes between 25 and 38 per cent of energy. In industrialized countries,



the main obstacle to the reduction of emissions derives from the fact that much of the current urban building stock in Europe was designed and constructed when energy was cheap and global warming was unheard of.

The authors of the report argue that transport is a key element in our race toward keeping the earth's temperature at an acceptable level. They point out that reducing CO₂ emissions from the transport sector is much easier than cutting those from the building sector: while new buildings can be constructed to consume low or zero energy, the energy consumption of existing buildings can only be improved to a limited extent (as buildings are made to last several decades or even centuries).

From their analysis the authors conclude that urban form strongly influences energy consumption and CO₂ emissions. Urban density and CO₂ emissions have a direct, inverse correlation: in general, the lower the density of a city, the higher its emissions from the transport sector.

Urban Mobility

Despite the perception that the private car plays a dominant role in urban mobility everywhere, data shows that this is true only in the United States, Canada, Australia, New Zealand, and the Middle East. Elsewhere, non-motorized and mass transit modes prevail. In Western Europe, for instance, non-motorized transport accounts for 50 per cent of urban trips.

While cities in the United States, Australia and New Zealand lead the world for the number of passenger cars per 1,000 persons, Western Europe and high-income Asian cities have placed more emphasis on public transport, rather than on individual car ownership, and therefore have lower ratios of car ownership to wealth.

An analysis of 28 cities shows that while car use tends to be higher in cities of the developed world, a significant number of cities in the developing world, particularly in Asia, have very high car ownership. Bangkok and Dar es Salaam, for instance, have more cars per capita than Tokyo and Mumbai. And in Singapore, the number of private vehicles per 1,000 inhabitants is lower than that of many cities in the developing world – a result of the city-state's effective mobility policy.

It is this kind of comparative analytical work that leads the authors of the book to argue that the contribution of cities to GHG emissions is more related to consumption patterns and gross domestic product (GDP) per capita than it is to levels of urbanization. They note that it is possible for cities to become centres of innovation and minimize their environmental impact through the use of alternative energy and resources that may reduce our dependence on fossil fuels and make our societies more sustainable.

They conclude that to meet minimum waste standards, cities must fulfil two prerequisites: minimization of fossil fuel use and material inputs; and maximization of recycling and reuse of energy, water and materials. The need for sustainable, or harmonious, urban development further requires cities to function with a circular, rather than a linear, metabolism.

Based on the international data in this report, in her introduction, Anna Tibaijuka, Executive Director of UN-HABITAT, points out that, "Many cities and countries are addressing these challenges and opportunities by adopting innovative approaches to urban planning and management that are inclusive, pro-poor and responsive to threats posed by environmental degradation and global warming." She continues, "From China to Colombia, and everywhere in between, national and local governments are making critical choices that promote equity and sustainability in cities. These governments recognize that cities are not just part of the problem; they are, and must be, part of the solution. Many cities are also coming up with innovative institutional reforms to promote prosperity while minimizing inequity and unsustainable use of energy."