



Environment & Climate Change

Environment, Climate change and Transport

Scientific consensus on climate change has grown rapidly in recent years as advances in analysis have been achieved. As evidenced by the most recent report of the [Intergovernmental Panel on Climate Change 2007 \(IPCC\)](#), the reality of climate change is now broadly accepted by both national and internationally-recognized scientific organizations and governments.

Climate change is one amongst the major issues facing the transport sector today, especially in developing countries, which are more vulnerable to its negative impacts. Efficient and effective transportation systems are essential to economic and social development. The challenge we are all confronted with is how to enhance mobility while at the same time preserving the environment and our quality of life.

Impacts of Transport on the Environment

Yet, transport affects our environment in a multitude of ways ([World Bank Handbook Roads and the Environment - World Bank 1997](#)).

One of the most important negative effects of the transport sector on the environment is its contributions to climate change through air pollution. Transport is currently responsible for 13 per cent of all world greenhouse gas (GHG) emissions and 23 per cent of global carbon dioxide (CO₂) emissions through fuel combustion ([ADB report – Rethinking Transport and Climate change](#)). Transport-related carbon dioxide emissions are expected to increase 57 per cent worldwide in the period 2005-2030, with the transport sectors of developing countries, particularly in Asia and Latin America, potentially contributing about 80 per cent of this increase if nothing is done. It is estimated that the People's Republic of China (PRC) and India alone will account for 56 per cent of the global increase. The majority of these increased emissions will come from private vehicles, both for passenger and freight transport.



The transport sector is also directly affecting the environment through soil depletion, biodiversity loss, land use, increase of noise levels, acidification, habitat loss and water pollution. Other, more indirect, consequences of transport related activities include natural resource depletion and negative visual effects.

Why Climate Change is a problem?

The long-term impacts of climate change include increased intensity and frequency of heat waves, droughts, storms and floods. These effects pose two major challenges to the transport community:

- 1) Ensuring that the transportation networks can withstand the changes to the world climate that are already underway (adaptations measures)
- 2) Reducing mobile source greenhouse gas emissions to avert future climate disruption (mitigation measures).

In order to respond to climate change, climate policy objectives must be integrated into the transport sector by considering the following elements by:

- mixing land-use and transport planning
- promoting high quality public and non-motorized transport
- mobility management
- developing energy-efficient vehicles and cleaner fuels.

If these measures are implemented, scientific studies show that sustainable development and major GHG reductions can be achieved.

For further information

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