Cities benefit from greenhouse gas inventories

Keeping track of greenhouse gas (GHG) emissions is just as important for local governments as for national governments, according to a new study. The researchers explain how cities benefit from GHG inventories, such as improvements in air quality, whilst also contributing to larger national strategies for climate change mitigation.

Burning fossil fuels not only produces GHGs, but also local and regional pollutants, such as sulphur dioxide, which can be harmful for human health and the environment. Policy measures that reduce fuel consumption can therefore have wide-ranging positive effects beyond tackling climate change. For developing countries, local benefits, such as improved health, may be necessary to justify climate change policies, as climate change is historically viewed as the fault of the developed world.

In this context, local, city-specific, emissions inventories, which allow scientists to model future emissions scenarios, can help evaluate different policy measures. In some developing countries, local emissions reduction campaigns are already underway. The Cities for Climate Protection (CCP) programme¹, for instance, encourages local governments to implement GHG reduction measures and improve urban air quality. The first step for a city participating in CCP is conducting a baseline emissions inventory and forecast.

According to the researchers, it is important for cities to have emissions inventories to help develop effective local air quality management strategies, but also, crucially, to contribute towards national compliance with commitments under the United Nations Framework Convention on Climate Change (UNFCCC) and attract investments in Clean Development Mechanism (CDM) projects. Only developed countries are committed to limiting emissions, but emerging countries, such as Brazil, are still required to keep inventories on national GHG emissions and may be required to make further contributions in future climate change agreements.

Local actions could encourage action at the national level. As an example, they present the case of Brazil, where proposals for national mitigation measures arose through local forums discussing the local emissions inventories of Rio de Janeiro and São Paulo.

In Rio de Janeiro, guidelines were adapted from those written for national inventories by the Intergovernmental Panel on Climate Change in 1996. Local air pollution improved by replacing diesel and petrol powered vehicles with bioethanol-fuelled and electric vehicles, and public lighting improved through energy efficiency savings. In both cities, energy use accounted for between a half and three quarters of all emissions. The researchers say the energy sector is therefore of extreme importance, requiring special attention in GHG emissions inventories.

1. See: www.iclei.org/index.php?id=800


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