



The 2015 International Climate Change Agreement Bridging the Emissions Gap with Land Transport

Scientific evidence has clearly linked global warming with increasing emissions of greenhouse gases (GHG), notably carbon dioxide (CO₂). The Stern review, published in 2006, pointed to a 75% chance that global temperatures would rise between two and three degrees above the long-term average. The most recent UNEP report¹ now indicates that currently pledges by Governments mean that we are on track for something like three to five degree rise this century. This is way beyond the levels which scientists say climate change becomes catastrophic and irreversible.

For the first time in human history, the concentration of CO₂ in the atmosphere has passed the milestone level of 400 ppm.

What's driving up emissions?

Transport has an especially important role to play in the fight against climate change. It accounts for 27% of energy related global emissions (International Energy Agency, IEA) but global demand for mobility has grown rapidly and will not decrease in the foreseeable future, especially in developing countries. The number of cars on the road is expected to triple by 2050 to over two billion and more miles driven by more private vehicles will mean that emissions from the land transport sector will increase by 120% by 2050 causing temperatures to rise even further (OECD). This will not just affect irreversible climate change; it will also have dire economic consequences and significantly impair quality of life.

The number of trips made in urban areas every day is likely to increase by 50% between 2005 and 2025.

2015 - The year for change

2015 is going to be a big year. Through the Durban Platform for Enhanced Action (ADP), Governments are aiming to draw up a new global treaty on the climate, requiring emissions curbs from both developing and developed countries that could be signed in 2015 and would come into force from 2020. It is also the year that a set of Sustainable Development Goals will be established, which will build upon the Millennium Development Goals (MDG) and converge with the post 2015 development agenda. These complementary mechanisms have the potential to tackle the rapid rise in emissions from the transport sector while delivering multiple benefits for society.

Cities around the world are already aware of public transport's role in addressing climate change and there are many examples of local-level success.

Controlling emissions without compromising growth

The UNEP calculates that the entire transport sector has the potential to reduce its emissions by 32% by 2020². To achieve this, the report recommends an 'Avoid-Shift-Improve' approach to policies and measures to encourage an approach to low-carbon mobility. By designing measures around this approach it ensures:

- Reduced and avoided demand for emission-intensive transport modes while facilitating the increased mobility of people, goods and information and ensuring that efficient transport is devised around smart infrastructure and mobility planning;

¹ <http://www.unep.org/publications/ebooks/emissionsgap2012>

² Based on 2010 levels (includes shipping and aviation)



- A shift from more energy intensive and environmentally harmful modes of transport to less polluting and more efficient modes; for example, public transport, walking and cycling;
- Reduced impact through improved, cleaner transport technology and policy solutions.

There is growing evidence of the mitigation potential in the land transport sector while at the same time meeting the ever increasing demand for mobility and economic growth. Emissions and GDP can be decoupled, it is simply about identifying and implementing best practices and avoiding mistakes in the past. This can ensure non-OECD countries can grow and prosper while still meeting their mobility needs.

Avoiding inefficient mobility

Cities want to encourage a trend to a more sustainable model of mobility and provide the physical and technological infrastructure to enable it to operate effectively. Transport infrastructure built today strongly influences how people and goods will be moved in 50 to 100 years so it is essential the right decisions are made now as their associated emissions will be long with us after 2020.

There is a clear link between urban density and the use of the private car. The most successful cities are those which have a relatively low transport energy use per capita (UITP, 2006). They do this by avoiding unnecessary travel through effective land use planning.

In Toronto, it has shown that high density housing near public transport is 10 times more efficient than those in the suburbs with low density homes that are distant from commercial activity and reliant on private vehicles.

More but better transport

As the world's largest consumers and producers, cities have a key role to play in the fight against climate change. Using the Mobility Model of the IEA, UITP analysis has

shown that if current trends towards private motorisation prevail, in 2025 worldwide urban GHG emissions will be 30% higher than 2005 levels.

For every kilometer travelled, private motorised transport modes like cars and mopeds emit 3.5 times more GHG's per passenger than public transport (Source: UITP).

This will have a disastrous impact on the planet, making it impossible to limit the increase in average global temperature to two degrees and setting us on a path towards dangerous climate change. Modal shift offers a solution. By doubling the market share of public transport by 2025, urban transport, GHG emissions would stay close to 2005 level, despite the massive rise in trips, and the carbon footprint of urban mobility would be 25% lower than predicted³.

Decarbonising transport further

Public transport has been a low carbon transport provider of mobility for decades and is able and willing to do more. In the last decade alone, passenger rail transport has succeeded in reducing its specific energy consumption by 22%. There are further savings to be had by using light weight/composite materials (10% energy savings), and by optimising energy recuperation devices (up to 20-30% potential savings) and train operation management (up to 5-10% savings).

Simply by increasing the commercial speed and reliability for collective modes of transport, like buses, by giving them priority at traffic lights and reserved corridors/lanes makes a big difference. An increase in 5km/h in buses' commercial speed on a busy line leads to 20% less energy consumption and attracts more passengers⁴.

Smart, integrated mobility concepts based on public transport systems and complemented by low carbon transport

³ <http://growpublictransport.org/pt-benefits/fighting-climate>

⁴ <http://www.uitp.org/mos/focus/FPNov2011-en.pdf>



modes and shared assets is best suited to achieve low carbon mobility in the future.

In the city of Curitiba, it is estimated that their bus rapid transit (BRT) system had led to a reduction of 27 million car trips per year, which translates to nearly 27 million liters of fuel saved yearly.

An opportunity to bridge the emissions gap

The 2015 agreement will have to bring together by 2020, the current patchwork of binding and non-binding pledges to cut emissions into a comprehensive regime. In shaping the agreement it will have to bridge the gap in national emissions pledges and what is required to stay below the two degrees temperature rise. It can do this by enabling the highest possible mitigation efforts by all parties in key sectors through a legally binding agreement.

For land transport, targets and more incentives are needed to help countries, especially those in the developing world, develop their public transport infrastructure. This top-down and bottom-up route to tackling climate change will not only cut CO₂ and help bridge the emissions gap; it will help revitalise and develop economies, generate jobs and enhance everyone's quality of life. The ADP should recognise the mitigation potential of sustainable transport and endorse actions aiming to achieve the ambitious target of doubling the market share of public transport by 2025.

Nationally Appropriate Mitigation Actions (NAMAs) provide significant opportunities for transport. Broadly defined, NAMAs are actions voluntarily proposed by developing countries that significantly reduce emissions below business-as-usual levels. NAMAs provide the greatest opportunity to transform land transport in developing countries.

In Delhi, every passenger who uses the Metro instead of a car saves 100mg of CO₂ for every 10km travelled saving around 530,000 tonnes of CO₂ per year.

Despite demand for more sustainable transport, there is a clear funding gap for projects in developing countries. The ADP should encourage more ambitious NAMAs for transport by ensuring the appropriate scale of financial resources, technology transfer and capacity building support. The lessons from the CDM should be learned so that it does not inhibit the development of sustainable transport as pushing potential low CO₂ mass transport ridership away to single-occupancy private vehicles will have adverse CO₂ emissions implications and mean that we will not address the emissions gap.

Climate Funding

The Green Climate Fund (GCF) responds to the long-term financial support required to fund mitigation and adaptation to climate change in developing countries. By virtue of their scale alone, emissions from transportation must be a key part of any international climate fund. Creating a transportation 'window' in the GCF, with its own evaluation criteria to identify which projects to fund will help overcome some of the barriers to funding that have been faced by the land transport sector in the past and encourage more ambitious proposals. Appropriate evaluation criteria include⁵: consistency with a comprehensive low carbon transportation plan, long-term GHG reduction potential; cost effectiveness of the integrated bundle of measures, sustainable development co-benefits, local implementation capacity and cost-sharing.

Another area of related finance is the \$175 billion pledge made by the Asian Development Bank (ADB) and seven other multilateral development banks (MDBs) coming out of Rio+20. The new funds will be used to promote all forms of sustainable transport, including public transport; bicycle and walking infrastructure; energy-efficient vehicles and fuels; railways; inland waterways; and road safety. Recognising the importance of earmarking in the GCF will help further unlock the mitigation

⁵ Center for Clean Air Policy. Transportation NAMAs: A Proposed Framework. Washington, D.C. January 14, 2010



potential that exists in emerging and developing countries.

Reinforce broader sustainability

There may be no other sector where sustainable development and GHG mitigation are as closely aligned as in the transportation sector. This sector also provides unique opportunities for transformational policies that can catalyse low-carbon growth.

The 2015 agreement must reinforce and recognise broader sustainable development objectives. This includes follow up to Rio+20 and the review of the MDGs by 2015 and recognising the importance of sustainable transport for the future. Joint working and facilitating greater implementation of the voluntary commitments (VC) made at Rio+20 could further realise the quick uptake of sustainable low carbon transport policies and programmes.

UITP's strategy to double the market share of public transport, would mean that in 2025 a further 7 million green jobs are created, we would save 180,000 lives due to fewer traffic casualties and deliver global annual energy bill savings of 140 billion dollars at today's rate⁶.

Supporting collaborative working

To enhance ambition and drive for sustainable land transport, the sustainable transport community is willing to help countries to accelerate immediate climate action and go beyond their current mitigation commitments for 2020 and thereafter. By bringing key political players and stakeholders together, the mitigation potential for sustainable transport projects can be better understood and enhanced as well as the wider co-benefits for the economy and society. This can lead to better capacity-building which lays the framework for future reductions; the ADP must recognise the value of bringing these sorts of partnerships together.

Recommendations

Strong policies promoting a shift to sustainable low carbon land transport will mean transport can play its role in addressing the emissions gap. The Bridging the Gap partnership therefore calls on all parties and stakeholders in the buildup to the 2015 agreement:

- Recognise the mitigation potential of sustainable land transport and endorse actions aiming to achieve the ambitious target of doubling the market share of public transport by 2025.
- Encourage more ambitious transport NAMAs by developing countries along with mechanisms for ensuring the appropriate scale of financial resources, technology transfer and capacity building support.
- Create a transport 'window' in the GCF with its own evaluation criteria and link the GCF to the financial commitment made by the MDB's at Rio+20.
- Reinforce and recognise broader sustainable development objectives and ensure greater implementation of the VCs made at Rio+20 to realise the quick uptake of sustainable low carbon transport policies and programmes.
- Encourage greater dialogue and knowledge sharing on the development and diffusion of low carbon transport technologies.

To encourage international action - GIZ, Transdev, ITDP, UITP and TRL have decided to join forces to form "Bridging the Gap: Pathways for Transport in a Post 2012 process". The initiative aims to encourage the recognition that land transport can and should play in mitigating GHG emissions. Together we hope that a Post 2015 Agreement will be fully applicable to sustainable land transport.

www.transport2020.org

⁶ <http://growpublictransport.org/pt-benefits/supporting>