

Reduce, Shift, Improve

Transport and climate change

It is now common scientific knowledge that emissions of greenhouse gases (GHG) contribute to global warming and disastrous climate change. **Jane Barrett** looks at how all forms of transport contribute to such emissions and how transport can be changed to protect our planet.

Ten years ago it would have been unheard of for transport trade unions to be at the forefront of an international campaign to reverse the growth in transport emissions that are contributing heavily to climate change.

However the reality of floods in Pakistan, mud slides in China, fires in Russia and the threat of total submersion of the Pacific island of Vanuatu has galvanised affiliates of the International Transport Workers Federation (ITF) to take action.

The ITF in August held its 42nd Congress under the theme 'Strong Unions - Sustainable Transport'. The Congress, attended by over 1 000 delegates and representing over 500 transport unions worldwide, was preceded by a one-day special conference on climate change.

The congress and preceding Climate Change conference were held in Mexico City. This was very appropriate, as Mexico City, through a combination of radical public transport, energy, waste and planning interventions has in a relatively short space of time significantly reduced its carbon emitting and air pollution profiles.

The ITF Climate Change conference deliberated on a document *Transport Workers and Climate Change: Towards Sustainable low-carbon mobility* put together by a working group which included Jane Barrett the South African Transport & Allied Workers Union's (Satawu) Policy Research Officer. Satawu is an affiliate of the ITF.

CHALLENGE OF CLIMATE CHANGE

The starting point of discussion in the conference was an acceptance of the science of climate change and global warming. This science shows that there is a direct relationship between the increasing emission of greenhouse gases (with carbon dioxide CO₂ as the dominant GHG) and the warming of the Earth.

In turn, global warming has created worldwide changes in climates. These vary from area to area, but have manifested in coastal flooding, ferocious rain storms and consequent flooding, and drought. These climate events have led to disasters including water and food shortages, crop failures, an increase in water-borne diseases and malaria.

Climate disasters have affected



Jane Barrett of Satawu who chaired the ITF's climate change conference.

262-million people a year, with the poor being worst affected. Already 150-million people world wide have been displaced as 'climate refugees'. Climate change also interferes with ecological balances in our oceans and on land. Disturbances in these eco balances will worsen climate change.

UNPACKING GREENHOUSE EMISSIONS

The increase of greenhouse gases in the Earth's atmosphere has its

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roots in the industrial revolution. Prior to this, science shows that GHG's fluctuated on a natural path, which correlated with natural climate curves. However, since the industrial revolution GHG emissions have grown. If we continue on our current path of industrial production and consumption, and GHG emissions continue unchecked, scientists show that we will experience unparalleled economic and social collapse.

The relationship between advanced industrialisation and high levels of consumption and GHG emissions is starkly illustrated by comparing emissions in different countries, averaged per person of the country.

In the United States, the averaged figure shows that 20 tonnes of GHGs are emitted per person per year. In Norway the figure is 11 tonnes, and in Bangladesh 0.5 tonnes. Scarily, in South Africa the figure is around 9 tonnes. Considering the large numbers of people in South Africa who live in poverty, producing and consuming very little, this suggests that our small middle class emits at levels close to average levels in the US. South Africa produces 1% of the world's GHG emissions.

If the destructive increase in GHG emissions has been created by human beings, and if its consequences are already with us, then the ITF has concluded that the world's transport workers have no choice but to make a contribution to the reversal of increasing GHG emissions.

The fact that GHG emissions are growing fastest in the transport sector is a further reason for the ITF and its affiliates to take the problem seriously. The transport sector accounts for 13.1% of all GHGs, with road transport the biggest culprit - 74% of transport-related GHGs. Aviation contributes 12% of transport GHGs with short haul aviation the worst culprit, shipping 10% and rail 2%.

ITF STRATEGY: REDUCE, SHIFT, IMPROVE

The conference discussed a three-pronged strategy for the reduction of transport emissions:

- reduce unnecessary transport;
- shift from high-carbon to low-carbon modes of transport;
- improve transport technology.

The 'reduce transport' prong of the strategy goes to the heart of unsustainable worldwide patterns of production and consumption,

as well as unsustainable patterns of trade. It is an argument in favour of reducing supply chains by promoting local industrial development and challenging the basis of the commodity export economies of the South, including South Africa.

It also challenges the policy supposition prevalent in South Africa, that it is critical to reduce the cost of transport in order to promote growth. The 'reduce transport' position discourages the cheapening of transport on the grounds that it actually increases the demand for the movement of goods. For example the transport of bottled water, when perfectly drinkable water is available from the tap.

The 'reduce transport' prong is also an argument for improved town and city planning, which builds communities with local schools, workplaces and shopping locations so that the need for the movement of people is reduced. It is also an argument in favour of the massive upscaling of public transport.

The 'reduce transport' argument is based on a recognition that we need to review traditional measures of economic growth based on 'gross domestic product' which implies that the more that is produced and traded, the healthier the economy. It challenges this notion, and proposes that we redefine wealth to mean value-free time, vibrant communities, good mental and physical health, less stressful work and more meaningful relationships. It poses the possibility of economies driven by social and environmental priorities that are held together by social solidarity.

The second prong of the strategy is to shift from high-carbon emitting modes of transport to lower-carbon ones. This means a shift from private vehicles to affordable public mass transit and non-motorised transport such

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as walking and cycling. Other interventions include shifting short haul air passengers to rail, shifting road freight to rail and shipping and reducing the use of high CO2 emitting light delivery vehicles (LDVs) and heavy delivery vehicles.

The 'improve transport technology' prong of the strategy is the least controversial. Hundreds of interventions have been identified in all modes which could, and in some cases already do, reduce GHG emissions.

The carbon efficiency of road vehicles, in particular LDVs, can be drastically improved through the use of alternative fuels and vehicle technology, including engine downsizing, plug-in hybrids and electric vehicles.

In rail, technological options exist to reduce aerodynamic drag, lower weight, introduce more efficient locomotives and move to energy sources other than diesel. In shipping the replacement of bunker fuels with low sulphur fuels is a GHG-reducing strategy as is the reduction of speed, the introduction of larger ships and improving propeller design.

In aviation, improved communications and navigation reduces congestion, shortened routes and lower speeds are

possible and there is room for improved aerodynamics, engine technology and alternative fuels such as kerosene.

JOB IMPLICATIONS

Some might suspect that the Reduce, Shift and Improve strategy threatens transport jobs. To the contrary, early studies indicate that potentially more jobs could be created than lost.

It has been shown in Europe that public transport investments have a job multiplier effect of between two and four. In Europe and the US, every R10-million of investment in public transport infrastructure creates 30 jobs in construction and 57 jobs in operations. Another study in the US shows that public transport investment creates twice as many jobs per dollar than new road construction.

Rail is more labour intensive than road transport and the jobs it creates tend to be better quality ones. In the US a rail investment of \$1.8-billion can create 7 800 jobs in operations and manufacturing.

Where job loss could happen is in motor manufacturing. This impact is expected in the medium-to-long term whilst shifting production from private cars to public transport vehicles.

HOW TO ACHIEVE THIS?

If we are to achieve reduced GHG emissions in transport through Reduce, Shift and Improve, what do transport unions need to do?

First, they need to educate and engage membership to equip them to take up 'green bargaining'. This means identifying specific interventions for reducing GHG emissions, and putting them on the table as demands.

The strategy also demands the building of alliances. A powerful movement is needed which redefines wealth and demands social growth based on the principles of:

- job creation;
- reduced income inequality;
- climate-friendly technology;
- more leisure;
- improved and expanded social services;
- safe communities.

Above all, we must believe that a new low-carbon economy is necessary and that it is possible, and that transport workers can be at the forefront of saving the planet for future generations. **LB**

The ideas in this article are based on the ITF Climate Change discussion document www.itfcongress2010.org/documents.cfm. Satawu will develop it for the local context.



Jane Barrett