Finance and economy wide gains – We are Transport

There are many financing solutions for shifting to low carbon transport pathways – *Let’s make it happen*

1. Tackling climate change with sustainable transport is the biggest economic opportunity of the 21st century. Sustainable transport is a prerequisite for all countries to attain competitiveness, sustainable growth, balanced social and spatial development, and energy and food security. Investments decisions require a major perspective and a shift towards a mobility paradigm focused on people, environment and climate rather than individual or commercial vehicle use. Infrastructure funding will continue to come mainly from the public sector but cannot succeed without tapping substantial private investment through transparent and enabling financial frameworks.

2. Investing in low carbon transport networks and systems is now found to be cheaper than in traditional fossil fuel based infrastructure. These savings come from less infrastructure being required with denser more compact cities being planned and developed (in addition fewer hospitals, schools and other public service infrastructure is required); in addition fuel and maintenance costs are also reduced with fewer miles or kilometers being driven, less energy used, fewer accidents and better air quality. In addition compact cities allow mass transit to flourish and be profitable. This win-win situation strongly contributes to sustainable prosperity and a better quality of life for all.

3. Shifts in manufacturing centres significantly impact transport emissions in some countries (such as China and India) as they produce products that are consumed elsewhere (especially in Europe and the US). The transport flows and trade
routes that this has produces impacts global emissions and also national quotas. It is therefore not enough to act at national levels but also international levels to ensure that sustainable low carbon systems are put in place over the next 10 years.

**Narrative**

In the past decade, global average per-capita Gross Domestic Product (GDP) increased nearly 75% and average per-capita GDP in regions such as China, India, Southeast Asia and Eastern Europe more than doubling (UNSD, 2010). This growth in wealth obviously resulted in an increased demand in both passenger and goods (freight) transport. Since 2000, road and rail passenger and freight travel has increased by 40%, or by 15 trillion annual person-kilometres (p/km) and freight tonne-kilometres (t/km) – the equivalent of flying more than 400 million people around the circumference of the globe each year (IEA, 2012). Asia and the Pacific region accounted for more than half of that growth.

Between now and 2030, GDP is expected to grow especially in the developing world and as incomes rise transport increases. Higher than average GDP per capita growth can be expected in the largest developing economies with GDP per capita levels in China and India possibly increasing three to four times by 2030. However, levels in the developing economies will still be much lower in 2030 than in the high-income group.

On this basis air passenger traffic could double in 15 years, air-freight could triple in 20 years; and port handing of maritime containers worldwide could quadruple by 2030. Intercontinental and national road freight and passenger transport will all proportionally increase. Led by growth in Asia, in particular China and India, road and rail freight volumes are expected to increase by 230 per cent and 420 per cent, respectively, by 2050 (compared with 2010), depending on freight intensity of GDP growth. Passenger transport is likely to double by 2030 with most of this occurring in the developing world.

Quality infrastructure is a key pillar of international competitiveness. Major international gateway and corridor infrastructures are crucially important to the exports and imports of all the products and resources that the economies of all countries need and urban transport infrastructure impacts the competitiveness of cities and regions. In the future, this will become even more important. Current transport infrastructure capacity is not adequate to meet current or future demand. Not surprisingly, therefore, most of those countries with high-quality infrastructure also rank high in the world index for overall competitiveness.

Just over USD $3 trillion is the total figure required to transition for the period 2015-2035, over 70% relates to land transport (the Climate Policy Initiative & Nelson et al. 2014). The estimated 40 percent of global investment in transport that will occur in developing countries must become fully directed to sustainable transport, especially in the fastest growing developing nations.

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**Note:**


Phasing out fossil fuel subsidies is also seen as priority. The majority of developing world countries need to import processed oil products as transport fuel – becoming transport energy independent is therefore seen not only as a priority for climate reasons but also for economic stability reasons.

Many countries will need to ensure funding security and levels consistent with the development of the strategic infrastructure required to meet future transport needs. In many countries, there needs to be greater project certainty and funding assurance funds as, private sector financing will need to help deliver the equity and debt financing needed to make infrastructure projects operational. Private involvement can also help manage the transition to user-pays/self-financing investments and can increase efficiency as well as reduce public funding requirements.

Therefore, increased private sector investment in strategic transport infrastructure will be essential. There is increasing support for green growth and a “greening” of transport but risk-reward balances need to be consistent with financial contributors interests and expectations.

Transport is shaped by financial flows from various sources – public and private, national and international. Countries typically spend 2–13 per cent of their public budgets on transport. In 2010, domestic flows (public and private) were the most important source of finance in the transport sector (around US$583 billion), followed by foreign direct investment (around US$149 billion) and international debt finance (US$150 billion). The contribution of official development assistance amounted to 2 per cent of public investment (around US$8 billion). Public finance remains an essential source of finance for transport infrastructure construction and maintenance. However a global shift from private cars to mass transit could save more than US$100 Trillion and eliminate 1,700 megatons of CO₂ pollution by 20503.

Domestically financed public investment must emphasize cost recovery, including the “user pays” principle, and innovative approaches such as the capture of enhanced land-use value due to better transport. Social impact bonds and climate bonds can attract additional market-based financing, for public transport, road safety and sustainable transport improvements. Assistance from multilateral development banks and bilateral donors must leverage domestic and private funding more systematically. Climate financing, including the Green Climate Fund, will need to allocate a significant share of its funding to support low-carbon transport to ensure rapid action at scale.

Carbon pricing and alternative policy instruments will be also be necessary to trigger low-carbon investments. A high carbon shows strong potential as a policy instrument by which governments can stimulate the low-carbon investment needed. In the absence of carbon markets, innovation in technology deployment, policy action and investments can enable progress.

**Evidence/data supporting those facts**

Climate action combined with sustainable transport improvements stimulate economies, increase the number of green jobs and deliver climate benefits. New financial instruments that help the private sector to invest in transport can be leveraged

3 [https://www.itdp.org/high-shift-scenario-global-transportation/](https://www.itdp.org/high-shift-scenario-global-transportation/)
from including environmental performance criteria and allocating substantial amounts of climate related finance to stimulate the market.

The majority of new transport infrastructure will be built and growth in vehicles will occur in the developing world – it is therefore critical that the infrastructure is climate resilient and encourages low carbon transport while allowing economies to grow. This is now feasible if decision makers and leaders make the right choices today.

New financial instruments, mechanisms and facilities such as Climate Bonds, Public Private partnerships and Responsible investment principles will help to bring investments in from the private sector and help increase liquidity and spread risks.

The International Energy Agency, ITDP and UCD estimates cumulative monetary savings of over USD $70 trillion to 2050 (IEA 2012; ITDP et al. 2014 - Institute for Transportation and Development Policy and University of California, Davis) by redirecting funding away from road-dominant development to sustainable, low-carbon transport infrastructure and services for a 2° Celsius pathway compared to a ‘business as usual’ transport development scenario aligned with the 4° Celsius warming trajectory.

Sub-national governments are the engines for implementing sustainable, low carbon transport in the expanding urban areas of the globe. Suitably empowered by competent national governments, their effectiveness rests on their capacity and credit worthiness; key ingredients for them to scale-up sustainable, low carbon transport and other urban infrastructure.

The private sector can play an expanded role in the transition to sustainable, low-carbon transport systems provided local and national governments are able to arrange suitable financing modalities

Sustainable transport is an investment for the future not a cost for today:

- Globally, private sector investment accounts for 61% of total investment in transport infrastructure in high income countries but 34% in low-middle income countries.
- Higher proportions of private investment are found in sea and airports that lend themselves to more commercial models. However rail links and public transit investments can also benefit from partnerships.
- Private sector investment does not typically exceed 10% of total investment for roads and other land transport. In total, globally USD 1.4 to 2.1 trillion is estimated to be spent on capital investment in transport infrastructure annually (Lefevre 2014).

Governments must take a leading role in ensuring a shift to financing sustainable and efficient transport infrastructure and services. This could entail, for instance:

(a) determining national frameworks and policies for investment in sustainable transport; (b) providing incentives and market signals to trigger the shift in investment to sustainable transport systems (these can take various forms, such as phasing out fossil
fuel subsidies as deemed appropriate; and applying appropriate transport pricing mechanisms – such as road pricing taking into account actual externalities;

(c) assuming certain risks and providing appropriate guarantees to promote sustainable transport projects;

(d) promoting and participating in regional trade and transport development finance.

Examples and references
The role of development banks. Regional, subregional and national development banks have been playing an important role in enabling finance or facilitating access to finance for sustainable transport development.

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<th>International commitments to finance sustainable transport</th>
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<td>Financing transport infrastructure is a major challenge with capital expenditure currently estimated at between US$1.4 trillion and US$2.1 trillion annually. The Rio+20 commitment of eight development and multilateral banks 80 is to provide more than US$175 billion of loans and grants for transport in developing countries over the period 2012–2022. Between 2012 and 2013, approximately US$45 billion has been allocated for transport projects. Other initiatives include the Inter-American Development Bank’s fast disbursing fund (InfraFund), which aims to identify, develop and prepare bankable and sustainable infrastructure projects in Latin America and the Caribbean, 82 and the Caribbean Development Bank’s US$1.2-million Regional PPP Support Programme to assist governments in adopting sound PPP policies, and provide advisory assistance to implement projects, including in transport.</td>
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Despite the recent pledges by developed countries, as part of the international climate negotiations under the UNFCCC, of US$9.3 billion for the new Green Climate Fund, the amount of climate finance that will be available for transport remains uncertain. Nevertheless, climate finance can be used to complement and leverage sustainable transport investments and cooperation. Relevant activities may include raising awareness, building capacity, supporting national assessment and policy reforms, implementing pilot measures, identifying and implementing pilot projects, and leveraging/blending other sources of funding.

Bonds are a debt instrument issued by governments or private companies to raise funds from domestic or international capital markets for infrastructure development, provided they have sufficient credit enhancements or underlying project allows for an investment-grade rating. The performance of the bonds is subject to certain project-specific risk. The interest payments associated with infrastructure bonds (and repayment of the principal debt) are secured by, or serviced from, the cash flows generated by the underlying specific project or a portfolio of projects. Green or climate related bonds are a promising instrument for sustainable transport investments, and can be used for infrastructure as well as operational asset development.

Countries/territories such as Brazil, Chile, Hong Kong (China), Malaysia and the Republic of Korea have been successful in using project finance domestic currency bonds as a way to catalyse investor interest in infrastructure projects. In most cases their governments implemented reforms in the pension and insurance sectors to unlock long-term investors. This has created a pool of institutional investors with demand for
low-risk, long-dated assets in the domestic currency. In addition, governments have implemented crucial economic policies that prioritize macroeconomic stability, particularly by bringing down inflation and prevailing interest rates (Climate Policy Paper). In Africa, Kenya is a pioneer in the use of infrastructure bonds. In 2014, the Government issued infrastructure bonds to finance infrastructure needs, including the expansion of transportation networks in roads, railway and ports. The Kenyan government offered 12-year bonds worth 15 billion Kenya shillings (US$168 million) at a fixed rate of 11 per cent. With investment needs estimated at US$4 billion a year to deliver infrastructure pledges.

Shifting investment to low-carbon transport could also result in a positive impact with savings in operating costs providing investors additional cash that could then be invested back into the economy. Lower risk frees up reserves and releases further investment, and longer asset life means that investments need not be replaced as often, freeing cash for investment that would otherwise be needed for asset replacement or maintenance.

Recent years have seen the emergence of green bonds and climate-theme bonds. These are similar to traditional bonds, except that their proceeds are exclusively used to raise funds for climate-mitigation and adaption and other environmentally friendly projects. These bonds can be issued by governments, the private sector, commercial banks and international financing institutions and development banks and increase sources for new funding. Johannesburg, South Africa and Gothenburg, Sweden have issued transport related city bonds recently that were both over subscribed.

Private investors will need to play an increasingly important role in all areas and also help to catalyse change. This may take the form of large project involvements (such as infrastructure investments such as PPPs) but also at regional or national levels – by supporting multi-stakeholder partnerships. This is just one example from the maritime sector from many to be found in the 80 days campaign (www.ppmc-cop21).

The Environmental ship Index (ESI) had six founding ports that, together with IAPH (International Association of Ports and Harbors), provided the set up funds. The main challenge was to keep the participants convinced of the positive outcome of the project during the initial setting up period of the project that took about three years; this was crucial to ensure continued financing.

After the start in 2011, another key challenge was to convince ship owners to participate; more importantly that it was necessary to convince ports of the benefits the index could provide to the environment and climate so that they were willing to provide financial incentives for ships participating with high ESI Scores.

These problems have not been overcome and efforts are constantly needed to keep ports convinced of the reasons for continuing their financial support.

The ESI has now been in operation for nearly five years. Some 4000 ships are registered in the database and 40 ports and organizations provide financial incentives. www.environmentalshipindex.org
http://wpci.iaphworldports.org/


Green climate bonds have a high potential to be used to fund sustainable transport and more information can be found [here](https://www.climatbonds.net/standards/standard/transport)


Global Environment Fund - [https://www.thegef.org/gef/node/1541](https://www.thegef.org/gef/node/1541)

**Key players**

International funding agencies include the World Bank, Asian Development Bank, European Investment Bank, the InterAmerican Development Bank and the Central Andean Development Bank of Latin America (CAF).