



***REDUCING
TRANSPORT
GREENHOUSE GAS
EMISSIONS***

Trends & Data

2010

The International Transport Forum is a strategic think tank for the transport sector. Each year, it brings together Ministers from over 50 Countries, along with leading decision-makers and thinkers from the private sector, civil society and research, to address transport issues of strategic importance. An intergovernmental organisation within the OECD, the Forum's goal is to shape the transport policy agenda, and ensure that it contributes to economic growth, environmental protection, social inclusion and the preservation of human life and wellbeing.

This document was produced as background for the 2010 International Transport Forum, on 26-28 May in Leipzig, Germany, on *Transport and Innovation: Unleashing the Potential*.

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FOREWORD

This document provides a brief update of GHG emission trends from the transport sector and discusses the outcome of the United Nations Conference of the Parties to the Framework Convention on Climate Change held in December 2009 in Copenhagen. It is based on material collected for the OECD-ITF Joint Transport Research Committee's Working Group report on GHG emission reduction strategies which will be released in 2010.

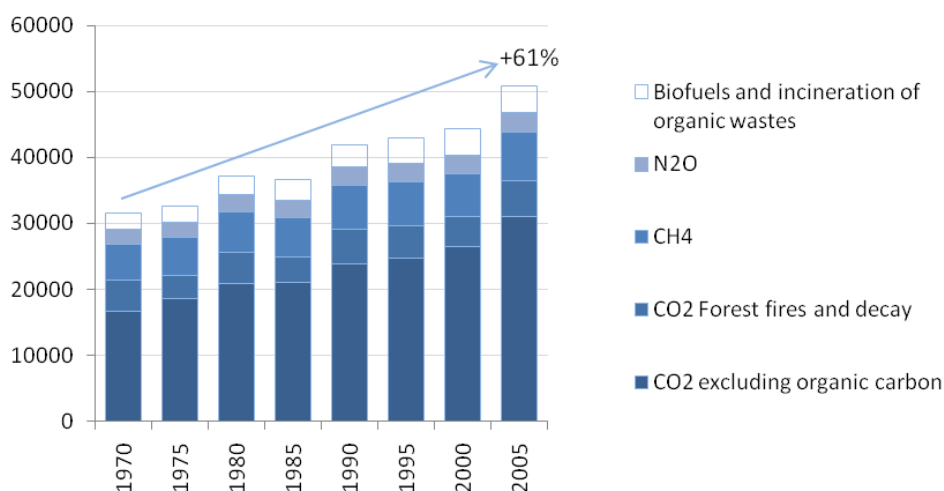
1. REDUCING TRANSPORT GREENHOUSE GAS EMISSIONS TRENDS & DATA 2010

- Transport-sector CO₂ emissions represent 23% (globally) and 30% (OECD) of overall CO₂ emissions from Fossil fuel combustion. The sector accounts for approximately 15% of overall greenhouse gas emissions.
- Global CO₂ emissions from transport have grown by 45% from 1990 to 2007, led by emissions from the road sector in terms of volume and by shipping and aviation in terms of highest growth rates.
- Under “business-as-usual”, including many planned efficiency improvements, global CO₂ emissions from transport are expected to continue to grow by approximately 40% from 2007 to 2030 – though this is lower than pre-crisis estimates.
- Road sector emissions dominate transport emissions with light-duty vehicles accounting for the bulk of emissions globally. In certain ITF member countries for which estimates can be made, road freight accounts for up to 30% to 40% of road sector CO₂ emissions though the breakdown amongst freight vehicle classes varies amongst countries. Emissions from global aviation and international shipping account for 2.5% and 3% of total CO₂ emissions in 2007.
- Some countries (e.g. France, Germany and Japan) stand out in that they have seen their road CO₂ emissions stabilise or decrease even before the recession of 2008-2009 despite economic and road freight growth over the same period.
- The economic crisis of 2008 has led to a prolonged downturn in economic activity and has had to the sharpest drop in emissions in the past 40 years (estimates range from 3% to 10%). Depending on the strength of the economic recovery, may translate into approximately 5% to 8% decrease in 2020 emissions from their pre-crisis projected levels.
- The outcome of Copenhagen Climate Summit has not provided a strong signal supporting future emission reduction efforts for either developed or rapidly developing countries. Early analysis of both low and high ambition pledges by countries following Copenhagen finds that mitigation action is unlikely to constrain global average temperatures to less than a 2 degree celcius rise which is the threshold for dangerous climate change identified by the IPCC.

Global emissions of GHG’s rose 61% from 1970 to 2005 – or roughly 1.4% per year (Figure 1-1)¹. CO₂ emissions largely dominate and have risen 86% (excluding forest fires and post-burn decay) between 1970 and 2005 or 1.8%. Of the estimated 45.4 Gt of GHGs (CO₂ eq.) emitted globally in 2005, approximately 59% - ~27 Gt. CO₂ eq. - resulted from the combustion of fossil fuel.

1. According to EDGAR 4.0 data. (IEA, 2009b), estimates global GHG emissions in 2005 to be less at 42.4 GT CO₂eq. with the following breakdown: 27.1 Gt CO₂(64%) from energy, 1.3 Gt CO₂(3%) from industrial processes, 3.8 Gt CO₂ (9%) from Land use change and forestry, 6.4 Gt CO₂ eq. (15%) of Methane, 3.3 Gt CO₂ eq. (8%) of Nitrous Oxide and 0.5 Gt CO₂ eq. (1%) of F-gases.

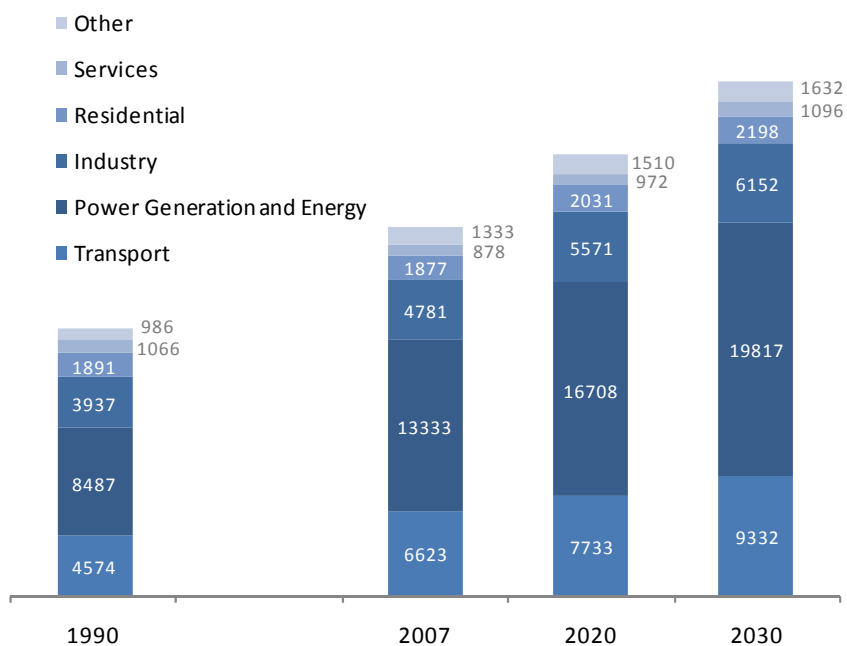
Figure 1-1: Global Anthropogenic Emissions of Greenhouse Gases: 1970-2005



Source: EDGAR 4.0, 2009

Transport accounts for a significant share of the global fossil fuel combustion-related CO₂ emissions. Total fossil fuel-related CO₂ emissions increased from 20.9Gt in 1990 to 28.8Gt in 2007, of which transport accounted for 4.58 (1990) and 6.63 (2007) Gt, representing an increase of approximately 45% (IEA, 2009). According to the World Energy Outlook 2009, global energy-related CO₂ emissions could increase to over 40Gt by 2030 and transport emissions would make up over 9Gt of that despite significant mitigation policies built into the reference scenario (Figure 1-2).

Figure 1-2: Projected world energy-related CO₂ emissions (Mt)

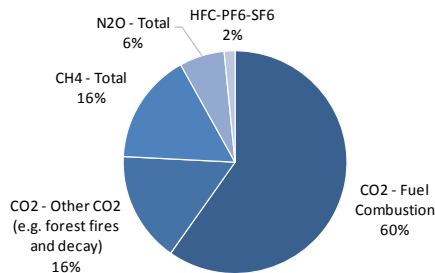


Source: (IEA, 2009)

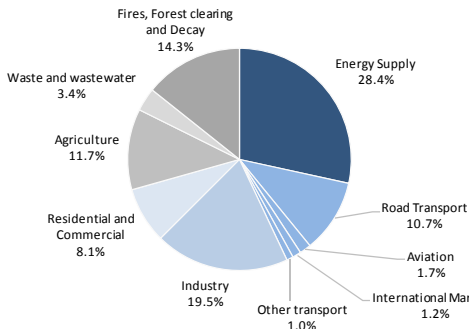
According to Figure 1-3, the transport sector (including international aviation and maritime) was responsible for 23% of world CO₂ emissions from fuel combustion (30% for OECD countries) in 2005 with the road sector largely dominating. When factoring in all GHG emissions, transport CO₂ emissions accounted for approximately 14.5% of global GHG emissions – *but this figure is much more tentative given the significant uncertainties in the absolute amount of GHG emissions, especially from agriculture, forestry and biomass decay.*

Figure 1-3: GHG and CO₂ Emissions 2005

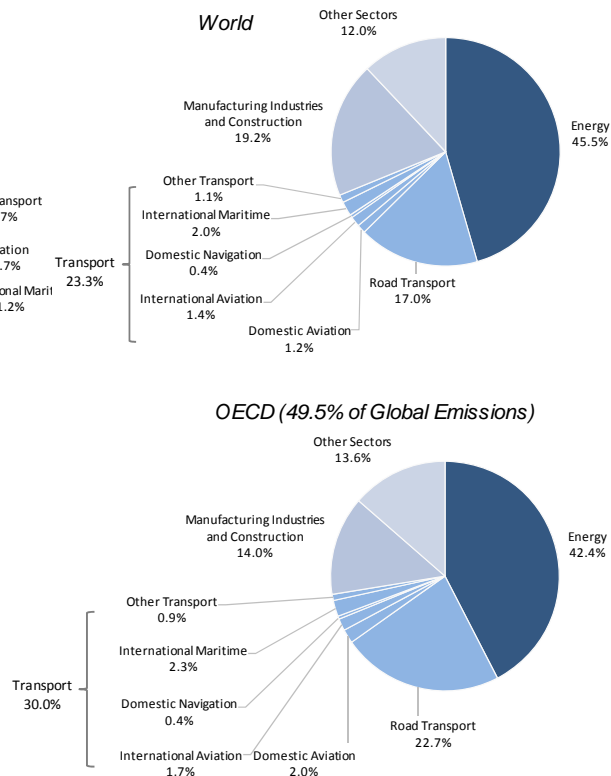
1.5A: 2005 Global GHG Emissions by Gas



1.5B: 2005 Global GHG Emissions by Source



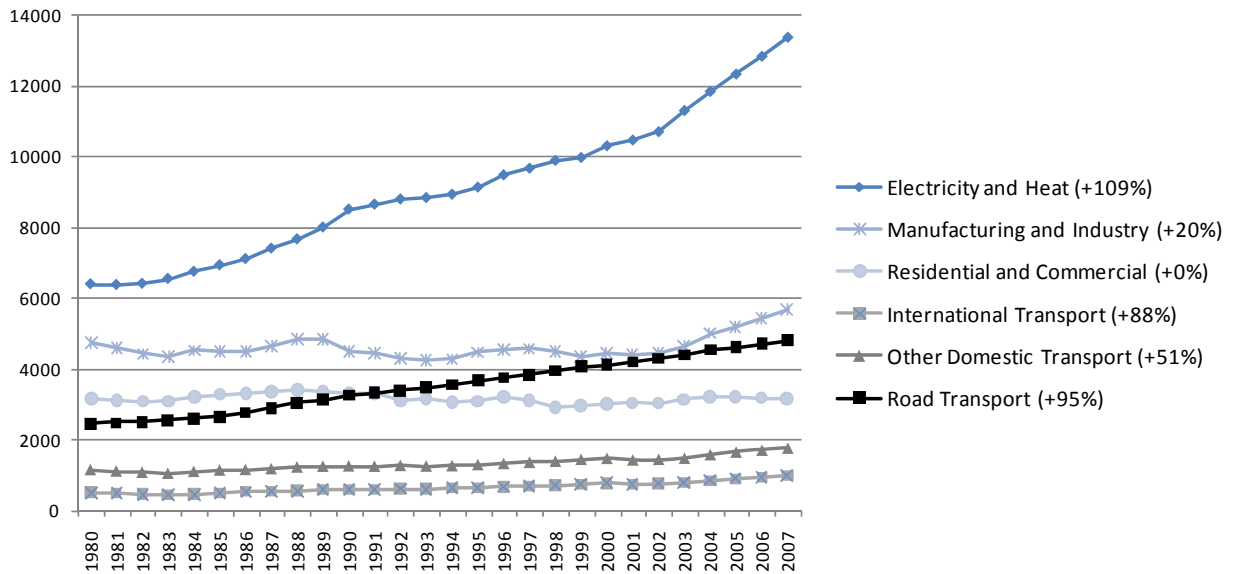
1.5B: 2005 Global CO₂ Emissions from Fuel Combustion



Source: EDGAR 4.0 (JRC/PBL) 2009 and IEA

Electricity production, road transport and industrial activity dominate global CO₂ emissions from fuel combustion and the former two sectors, along with international shipping and aviation, have experienced higher global growth rates than any other source sector (Figure 1-4).

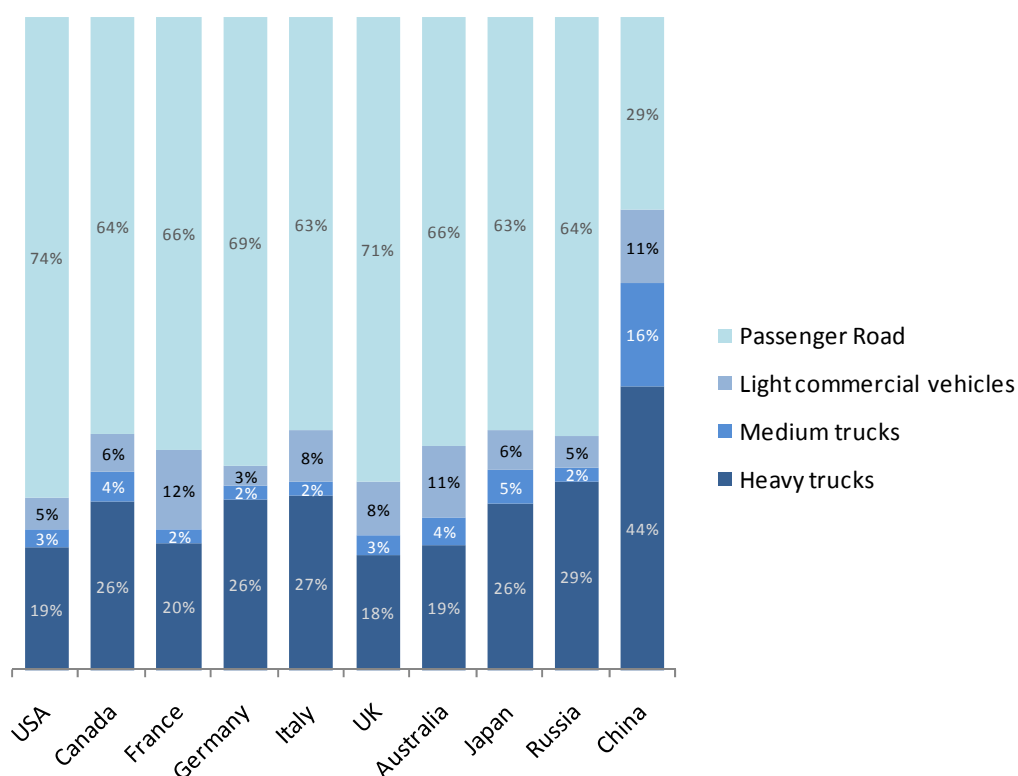
Figure 1-4: Sources of Global CO₂ Emissions 1980-2004 (Mt CO₂)



Source: data from (IEA, 2009)

Few countries disaggregate emissions data by freight versus passenger transport but a reasonable proxy can be calculated using fleet composition, fuel consumption and carbon intensity data. Figure 1-5 displays such an estimate of the breakdown between freight versus passenger CO₂ emissions from road transport for a selected number of countries. With the exception of China, CO₂ emissions from freight transport accounts for 30%-40% of the total road sector emissions though the breakdown amongst freight vehicle classes varies somewhat more amongst countries.

Figure 1-5: Estimated Breakdown of Freight Versus non-Freight Road CO₂ Emissions (Mt CO₂) in Selected Countries (2005)



Source: IEA/ITF MOMO data

According to IEA data, international maritime activity (calculated by the sale of fuel to vessels whose next port-of-call is outside the country) accounted for 610.4 Mt of CO₂ emissions from fuel combustion in 2007. Figures on fuel use and emissions from international maritime activity, however, are less accurate under current IEA reporting requirements² than for road, aviation and other transport sectors. An error ranging between 25% for cargo ships and a factor of two for the world fleet can be found by contrasting international maritime transport fuel sales data with activity-based estimates of ship energy requirements (Corbett & Köhler, 2003) (Eyring, Köhler, van Aardenne, & Lauer, 2005)³.

2. International marine “bunker” fuel statistics were not conceived to represent the total energy used by ships engaged in global commerce. Rather, these data were designed to differentiate fuel stocks that are covered by the allocation regime of the IEA’s emergency oil sharing system and those that are not. Some researchers find that that this leads to an erroneous estimate of maritime fuel use.
3. While early IEA estimates of maritime energy use seem to better match activity-based estimates, a clear divergence has emerged in later years. A primary cause of divergence between total fuel use and international fuel sales would perhaps be increased multiple-port calls within a nation over time. This change in voyage behaviour is consistent with the rise of containerized shipping during the 1970-1980 decade where increasing divergence would be expected during rapid transition to multi-port containerized logistics, followed by stabilized container service patterns and constant differences between fuel usage and statistics.

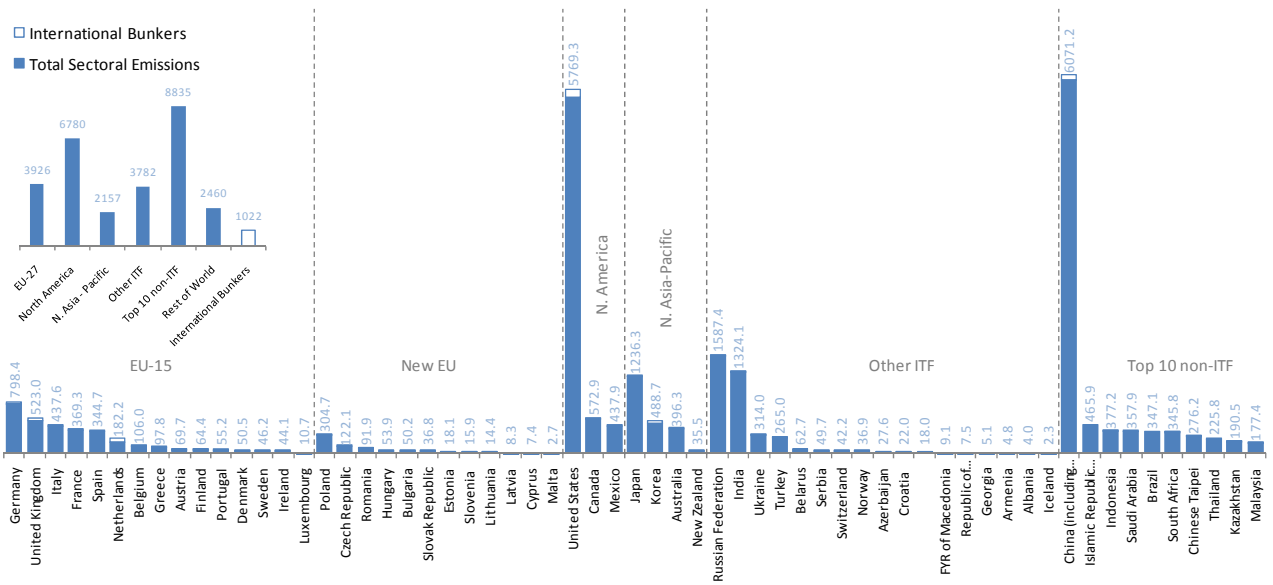
The International Maritime Organization's Marine Environment Protection Committee (MEPC) has estimated CO₂ emissions from shipping on the basis of a bottom-up, activity-based model. In its April 2009 report "Greenhouse Gas Emissions from Ships: Phase 2 Report" (Buhaug, et al., 2009) it presents a consensus estimate of CO₂ emissions from *all* ocean ship activity of 1054 Mt in 2007 of which 870 Mt result from *international* shipping (955 Mt and 795 Mt, respectively in 2005). This represents 38% more than the IEA's estimate of 2007 CO₂ emissions from marine bunkers and places international shipping between the 2007 national emissions of Japan and Germany. The new estimate of CO₂ from international shipping accounts for approximately 3% of world CO₂ emissions from fossil fuel combustion in 2007.

IEA estimates that global international aviation accounted for 411.6 Mt of CO₂ emissions in 2007 and 400.2Mt in 2006 (IEA, 2009). Figures for global domestic aviation were 334.0Mt and 330.3Mt, respectively in 2007 and 2006. For 2006, the IEA's combined international and domestic aviation CO₂ emissions estimate (730 Mt) is approximately 15% higher than the International Civil Aviation Organization's (ICAO) 2006 estimate of 632 Mt which can be partially explained by the fact that ICAO does not include fuel use by embarked auxiliary power units and excludes visual flight rules flights and non-scheduled flights in regions not covered by radar (ICAO, 2009). IEA data may also contain some military-related fuel use and emissions when these are not segregated in national reporting data.

Figure 1-6 shows total CO₂ emissions from fossil fuel (including international bunkers assigned to countries on the basis of national sales) by ITF region and country. North America and the top-ten CO₂-emitting non-ITF/OECD countries⁴ dominate representing 55% of world emissions. While the EU 27 trails North America within the ITF, the bulk of EU 27 emissions take place in the founding 15 members of the EU. The ITF countries as a whole accounted for approximately 60% of world CO₂ emissions. Respective shares for the EU, ITF Asia-Pacific and other ITF countries (dominated by Russia and India) are 14.6%, 7.9% and 13.2%, respectively.

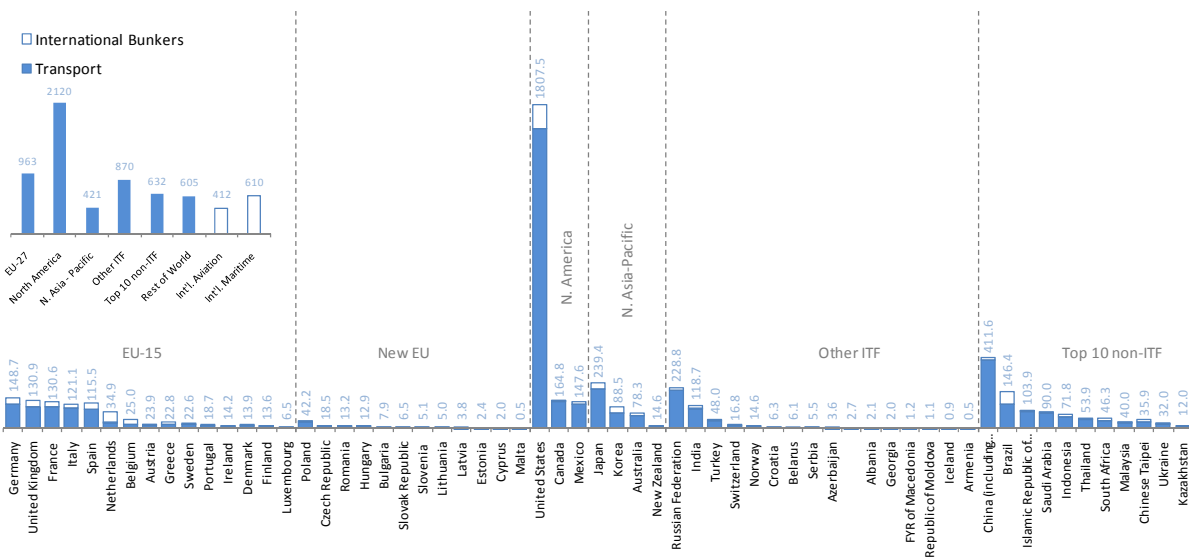
4. Brazil, China (including Hong Kong), Islamic Republic of Iran, Indonesia, Kazakhstan, Malaysia, South Africa, Saudi Arabia, Chinese Taipei, Thailand,

Figure 1-6: Total CO₂ Emissions from Fossil Fuel Combustion (including International Transport) in 2007 by ITF Region and Country



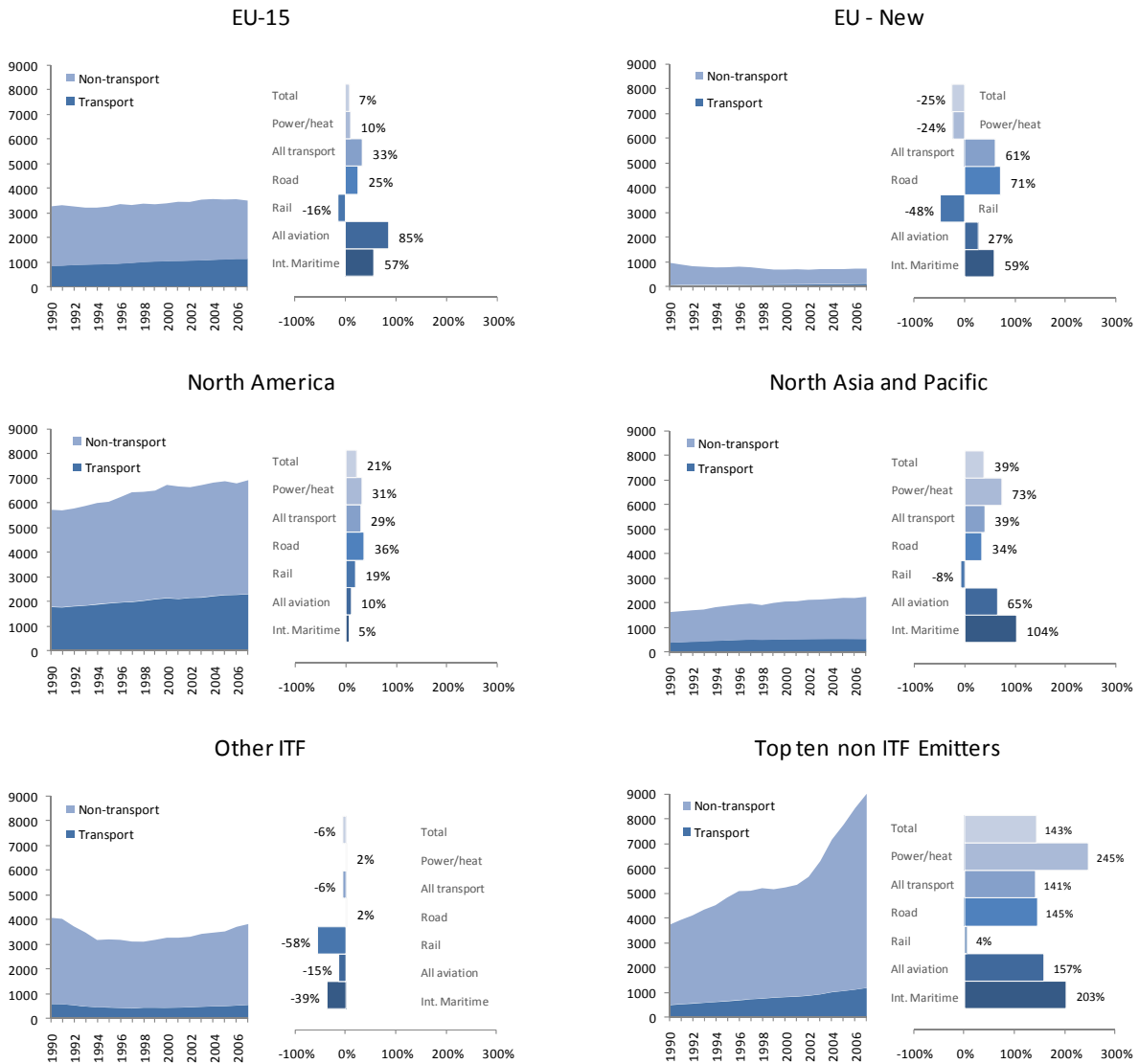
Source: data from (IEA, 2009)

Figure 1-7: Transport CO₂ Emissions from Fossil Fuel Combustion in 2007 by ITF Region and Country



Source: data from (IEA, 2009)

Figure 1-8: Total CO2 Emissions (Mt) by Region⁵ and % Growth by Sector (Including International Aviation and Maritime Transport⁶): 1990-2007



Source: data from (IEA, 2009)

Figure 1-7 shows total transport-related CO2 emissions from fossil fuels (including international bunkers assigned to countries on the basis of national sales). North America largely dominates other regions, including the top ten non-ITF countries indicating that a large share of the latter’s CO2 emissions comes from non-transport activity. As with total CO2 emissions, EU 15 emissions represent a dominant share of EU27 emissions, and the United States, Japan and Russia largely dominate the transport-related CO2 emissions from their respective regions. Combining international transport emissions with total domestic transport emissions, as done in this figure, can bias the analysis of some nations’ true emissions – especially where small countries operate large international ports or airports

5. See Appendix I for breakdown of regions
6. By region of fuel sale

serving a wider region, as in the case of the Netherlands. Combined, emissions from international aviation and international maritime transport (IEA, not IMO, estimate – see above) are higher than all but one country and higher than all but one world region.

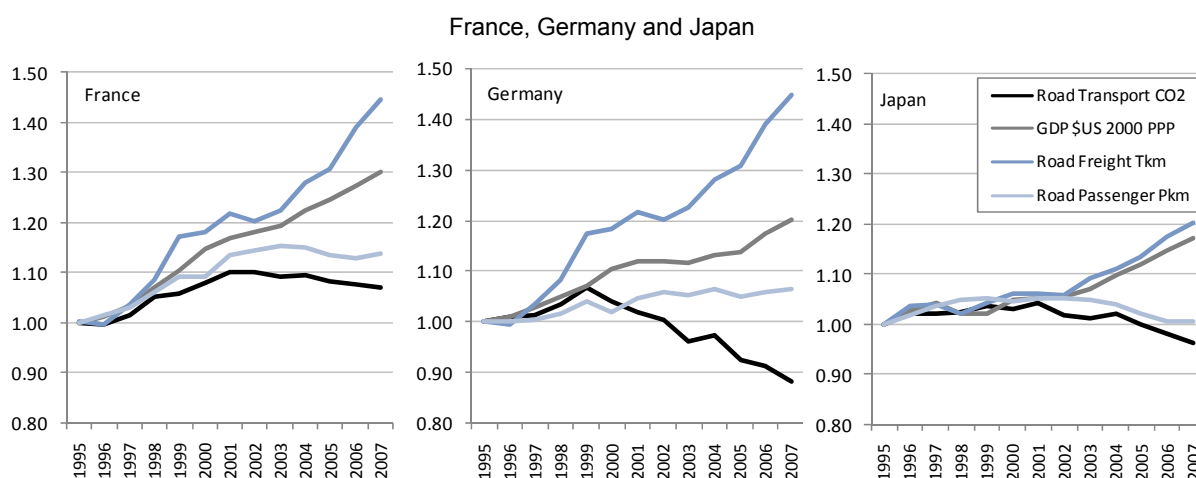
Figure 1-8 displays the regional breakdown of CO₂ emissions from fuel combustion and tracks the growth rates in emissions from 1990 to 2007 across different sub-sectors. Growth in CO₂ emissions has been variable across these regions but the highest emitting regions have almost all experienced growth in overall CO₂ emissions (EU-15 +7%, N. America +21%, ITF Asia-Pacific +39%). Growth has been fastest in the top-ten non-ITF countries where overall emissions grew by 142% between 1990 and 2007. China alone experienced 172% growth in CO₂ emissions from fuel combustion over the same period.

Growth rates of emissions from the main CO₂ emitting sectors also vary by region, but the highest emitting regions have seen significant growth in transport-related CO₂ emissions. EU transport sector emissions are rising faster in the new EU states (+61% – albeit from a much smaller base) than in the EU-15 (+33%), but the latter have seen an 85% increase in aviation emissions over the same period. North America has experienced roughly similar rates of growth for energy, transport and aviation – and this, from a much higher base (+31%, +29% and +10%, respectively). ITF North Asia-Pacific has seen growth in emissions from all sectors. The growth in transport sector emissions in this region (+39%) has been lower than the growth in aviation and maritime transport for these countries (+65% and +104%, respectively).

Russia dominates the emissions of the other ITF countries and because of the structural changes experienced there in the beginning of the 1990's, CO₂ emissions have dropped across all sectors for the period 1990-2007. This trend is reversing and transport emissions have seen a 17% growth across these countries since 2000 driven by growth in Russia and India. Mirroring trends in overall emissions, growth in transport-sector CO₂ emissions for the top ten non ITF economies have risen dramatically over the past 15 years. Transport-sector emissions have risen by 141%, aviation emissions by 157% and international maritime emissions by 203%. However, the relative weight of the transport sector is much less in these countries.

Adjusting for those countries of the former Soviet Union and Eastern Europe that experienced large structural adjustments in the early 1990's, the general trend has been for a near-continuous increase in transport-related CO₂ emissions in most economies. Some countries (e.g. France, Germany and Japan – see Figure 1-9) however, stand out in that they have seen their road CO₂ emissions stabilise or decrease even before the recession of 2008-2009 despite economic and road freight growth over the same period. There are many factors at play in this trend including changes in fuel taxation in Germany leading to some cross-border fuelling (which would not show up in Germany's IEA CO₂ statistics). However, a stabilisation or drop in road passenger traffic and the impact of better light-duty fuel economy have played an important role in all three countries, along with a drop in average traffic speeds in France and better freight truck load factors in Japan.

Figure 1-9: Evolution of Road Transport CO2 Emissions, Road Passenger Kilometres, Road Freight Kilometres and GDP: 1995-2007



Source: ITF data and (IEA, 2009)

Relative Indicators of Transport GHG Emissions

The previous section addressed the absolute levels of GHG and CO₂ from International Transport Forum (ITF) countries. Obviously some countries and regions emit more CO₂ than others as a result of a number of factors (e.g. population size and demographic growth, travel distances, climate, power sources and level of economic activity). Accounting for emissions per capita and/or emissions per unit of economic activity allows a common benchmark for comparing national or historical emissions. Figure 1-10 displays per-capita emissions of CO₂ from the transport sector (including international aviation and maritime, allocated by country of sale of fuel) and transport CO₂ emissions per unit of GDP in 2007 for all International Transport Forum Countries and the top-ten largest CO₂ emitting non-ITF economies.

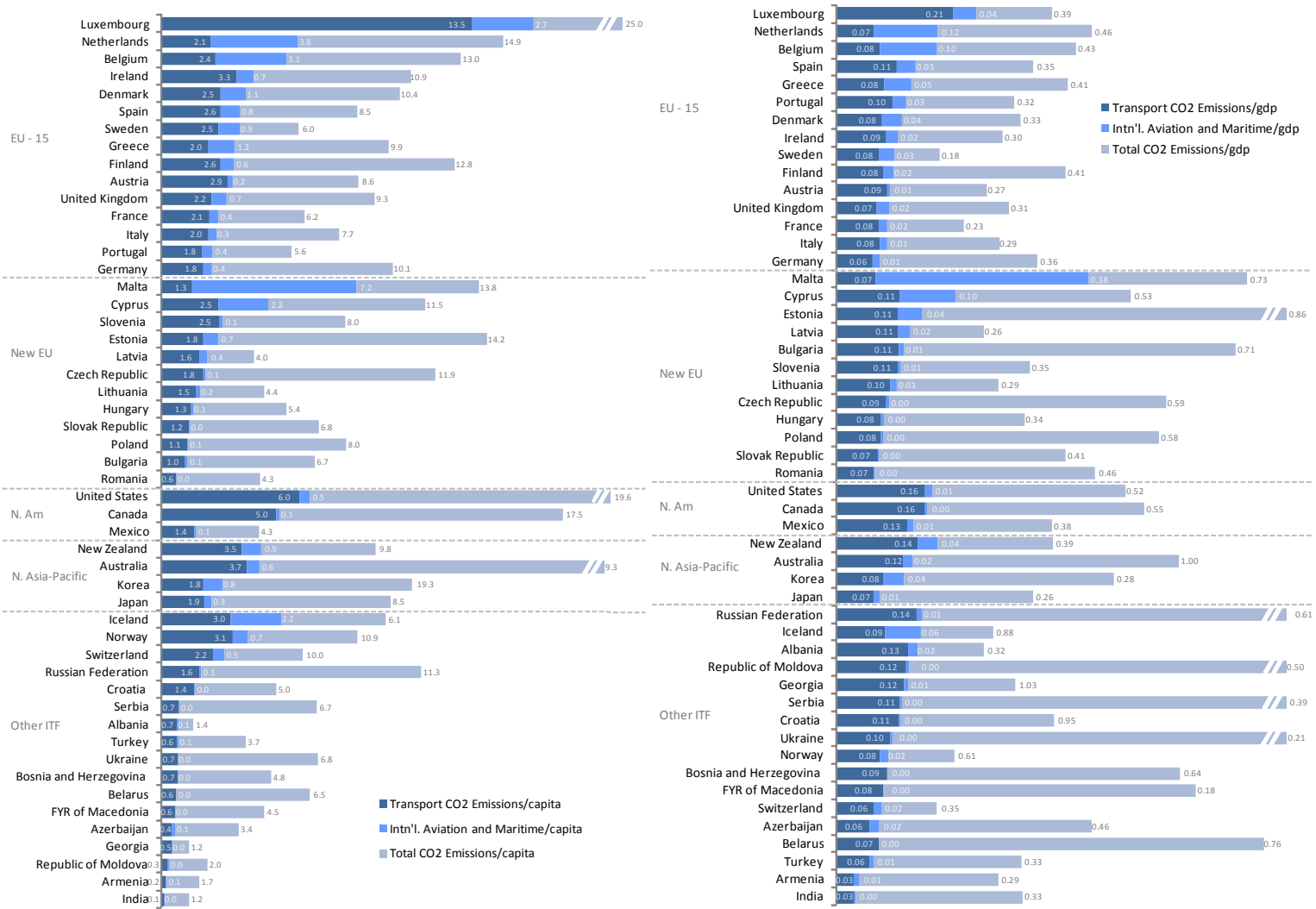
Per capita emissions of CO₂ from transport (excluding international aviation and maritime) among ITF countries varied from 6.5 tonnes in the USA⁷ to 0.1 tonnes in India. The average per capita emissions of transport CO₂ is 1.5 tonnes for ITF countries which is considerably higher than the per capita emissions of the principal CO₂-emitting non-ITF countries (e.g. China per capita emissions of CO₂ from transport are 3.6 tonnes).

Levels of transport CO₂ emissions per dollar of GDP (PPP, 2000 USD) are more balanced among most ITF countries. The average GDP intensity of transport CO₂ emissions for International Transport Forum (excluding international aviation and maritime) countries is 0.10 kg of CO₂ per dollar of GDP.

Generally, wealth creation and economic growth has been accompanied by rising per-capita CO₂ emissions from transport activity. Countries differ in the relative per capita transport CO₂ intensity of their growth. For instance, Turkey, Denmark, Hungary, New Zealand, Austria and Portugal all experienced roughly the same rate of per-capita GDP growth but displayed a very wide range of per-capita transport CO₂ emissions growth. Even if many countries have been able to increase per-capita GDP at relatively lower rates of growth of transport CO₂ emissions, the absolute increase in transport-sector CO₂ emissions from these countries is not negligible.

7. Luxembourg shows 18 tonnes per capita but this is largely due to petrol sales to non-Luxembourg residents spurred by low relative fuel tax rates.

Figure 1-10: Per-Capita and Per-GDP Emissions of Transport CO₂ in 2007
 (including international aviation and maritime transport, allocated by country of fuel sale)



Source: Data from IEA

Impact of the 2008 economic crisis

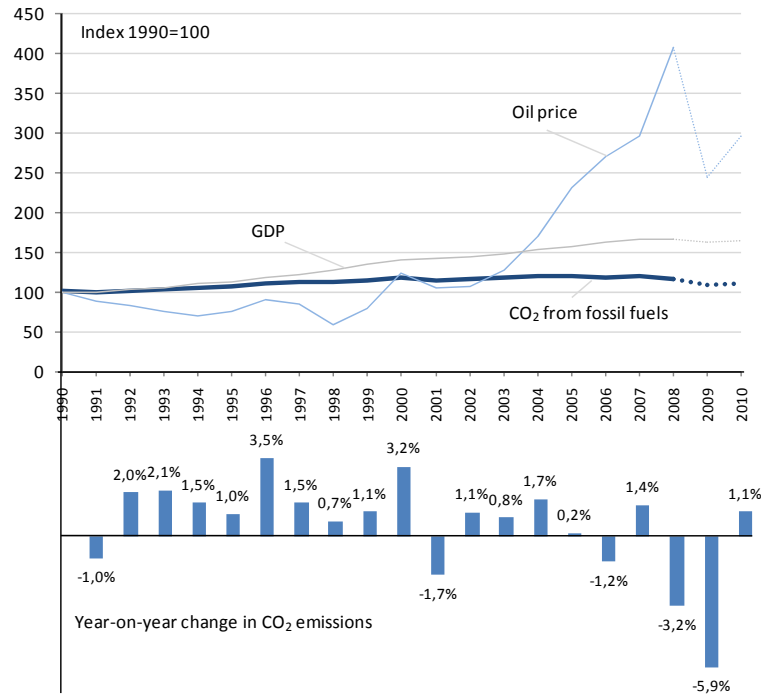
The economic crisis of 2008 has led to a prolonged downturn in economic activity and has had a significant impact on CO₂ emissions. The IEA has estimated that growth rates of CO₂ emissions dropped sharply in 2008 and absolute emissions of GHGs dropped more in 2009 than at any other time in the past 40 years (IEA, 2009). This decrease in emissions should have a lasting impact on the rate of growth of CO₂ concentrations given the long atmospheric life of CO₂.

According to the IEA, emissions in 2009 are projected to be as much as 3% lower than 2008 emissions leading to as much as 5% lower 2020 emissions from their pre-crisis projections. The Netherlands Environmental Assessment Agency (den Elzen, Mendoza-Beltran, van Vliet, Bakker, & Bole, 2009) estimates more pessimistically that the crisis will contribute to a 10% drop in global GHG baseline emissions in 2010. Assuming that GDP growth returns to its previous trajectory and remains unchanged in its scope, this translates to an 8% reduction from projected baseline 2020 GHG emissions. The US Energy Information Agency, in its 2009 International Energy Outlook (US EIA, 2009) projects a smaller impact on global CO₂ emissions but notes that world regions will not be affected uniformly – it estimates that OECD regions will see a net drop in CO₂ emissions due to the crisis but that overall emissions will continue to rise (albeit at a slower rate) led by continued growth in emissions in Asia and in China in particular.

Already, many countries have noticed a drop in GHG emissions – for instance, the US Environmental Protection Agency has announced a 3.2% drop in CO₂ emissions from 2007 to 2008 (US EPA, 2010) and the US Energy Information Agency expected a 5.9% drop in emissions from 2008 to 2009 (see Figure 1-11) which turned out to be less than the final 6.6% drop it recorded in its April 2010 Short-Term Energy and Summer Fuels Outlook (US EIA, 2010). CO₂ emissions from transport have dropped most steeply in 2008 (-5.7% from 2007 levels) wiping out more than 7 years of emissions growth (transport sector emissions in 2008 were 1.3% below their 2000 levels). While the steep oil prices of 2008 contributed to this decrease in emissions in transport, the US Energy Information Administration also notes the impact of drops in energy use related to the manufacturing and industrial sector which has been hit hard by the downturn. In its most recent assessment, the EIA projects a slight upturn in overall US CO₂ emissions in 2010 and 2011 (+2.2% and +1.1% year-on-year growth rates respectively) but does not believe emissions will recover their 2008 levels by 2011. This is a faster recovery than had been expected by the EIA – at least for 2010 (US EIA, 2010). Emissions from petroleum use have dropped less than the overall average (-5% from 2008 to 2009) but are expected to recover at a lower rate than overall emissions (+0.7% and +0.9% year-on-year growth rates, respectively, in 2010 and 2011).

The ultimate long-term impact of the recession on GHG emissions will depend on the form of the recovery. A convergence back to previous growth paths and a continuation of past economic patterns will quickly lead back to steeply rising GHG emissions in the absence of robust GHG mitigation policies. A convergence back to previous growth paths on the basis of changed and lower-carbon economic activity will see lower rates of GHG emissions than before. Changes in trading patterns and production and consumption patterns that seek to alleviate energy shock risks might also see reduced GHG emissions from past business-as-usual trends. Finally, should economic activity not return to previous levels or should the recession last longer than expected, GHG emissions would likely deviate from the pre-crisis growth trajectories.

Figure 1-11: Oil price, GDP and CO₂ emissions in the USA 1990-2010 (2009-2010 data provisional)



Source: (US EIA, 2009)

1.1.1. Post-Copenhagen GHG reduction targets

In December 2009, COP 15 in Copenhagen concluded with no agreement on a legally-binding international agreement regarding GHG emissions after 2012. COP-15 did take note of the hastily negotiated “Copenhagen Accord” (see box) and decided to put off to COP 16 (December 2010) agreement regarding the replacement to the Kyoto Protocol. Many countries have announced new mitigation commitments and voluntary actions in the run-up to Copenhagen and in response to the Copenhagen Accord’s call for both binding GHG reduction targets from Kyoto Annex 1 countries and declarations of voluntary Nationally Appropriate Mitigation Actions (NAMAs) by other parties to the UNFCCC. These are summarised in Table 1-1, Table 1-2 and Table 1-3.

Table 1-1: Copenhagen Accord Quantified Emission Reduction Targets for Annex I countries as of 31 January, 2010

Australia	<ul style="list-style-type: none"> • -5 % from 2000 levels by 2020 if acting unilaterally • -15 per cent by 2020 if other major developing economies make comparable efforts • -25% by 2020 if the world agrees to an ambitious global deal to stabilise levels of CO₂ equivalent at 450 parts per million or lower (-20% cap-and-trade + -5% from international credits)
Belarus	<ul style="list-style-type: none"> • between -5% and -10% from 1990 levels by 2020 (conditional on access to Kyoto mechanisms, capacity building and accounting for transitioning to a market economy)
Canada	<ul style="list-style-type: none"> • -17% from 2005 levels by 2020
Croatia	<ul style="list-style-type: none"> • -5% from 1990 level by 2020 (to be replaced with a negotiated target upon accession to EU)
European Union	<ul style="list-style-type: none"> • -20% from 1990 levels by 2020 • -30% by 2020 if other countries adopt strong targets
Iceland	<ul style="list-style-type: none"> • -30% from 1990 levels by 2020 (linked to the EU high ambition goal and conditional upon comparable efforts from other Annex I countries)
Japan:	<ul style="list-style-type: none"> • -25% from 1990 levels by 2020
Kazakhstan	<ul style="list-style-type: none"> • -15% from 1990 levels by 2020
Lichtenstein	<ul style="list-style-type: none"> • -20-30% from 1990 levels by 2020 (aligned with EU target)
Monaco	<ul style="list-style-type: none"> • -30% from 1990 levels by 2020 (using Kyoto mechanisms as well as national mitigation)
New Zealand	<ul style="list-style-type: none"> • -10-20% from 1990 levels by 2020 (conditional on a global agreement consistent with a less than 2° C temperature rise, significant action by non-Annex I countries, agreed rules on LULUCF and full recourse to a global carbon market).
Norway	<ul style="list-style-type: none"> • -30% GHG emissions from 1990 levels by 2020 • -40% if other countries adopt similar targets
Russia	<ul style="list-style-type: none"> • -15 to -25% from 1990 levels by 2020 conditional on LULUCF and a legally binding international agreement.
USA:	<ul style="list-style-type: none"> • Approximately -17% below 2005 levels by 2020 (depending on the passage of national legislation)

Source: UNFCCC

The "Copenhagen Accord" and other outcomes of COP-15

COP 15 in Copenhagen ended on 19 December, 2009 without establishing a legally-binding framework for replacing the Kyoto Protocol. Progress on resolving the two-track negotiation covering signatories of the Kyoto Protocol (the "KP Track") and all UNFCCC parties (under the Ad Hoc Working Group for Long-Term Cooperative Action or the "LCA-track") stalled in the final hours. After a last-minute negotiation amongst a small group of major emitters, parties were presented with a 3-page "Copenhagen Accord" which was not adopted though the final plenary "took note" its' contents. The final status of the so-called Copenhagen Accord is uncertain. Some countries would see it as a framework for a single new legally-binding agreement to be negotiated by COP-16 while many others would view it rather as an over-arching statement of principles to cover continued negotiations under the two-track progress. The main elements of the Copenhagen Accord (CA) are:

- action should be taken to limit the increase in global temperature to no more than 2°C against pre-industrial levels;
- emissions should peak as soon as possible;
- developed (Annex I) countries should submit non-binding 2020 emissions-reduction targets to the UNFCCC by end-January 2010 (See Table 1-1);
- developing countries should submit nationally appropriate mitigation actions (NAMAs) to the UNFCCC by end-January 2010 (see Table 1-2);
- developed countries should provide \$30bn in financing to developing countries by end-2012, rising to \$100bn per year by 2020;
- measures should be established immediately to cut emissions from deforestation; and
- an assessment of the CA's implementation should be completed by 2015, and should allow for a tightening of the 2°C target to 1.5°C if warranted.

There is no specific reference to transport in the Copenhagen Accord though meeting a 2°C emissions trajectory will most likely require important and counter-trend reductions in transport GHG emissions.

The COP-15 plenary also extended the negotiations in both the KP- and LCA-tracks with a view to agreeing a legally-binding treaty at COP 16 in Mexico (December 2010). This has potential repercussions for transport, not only because ambitious targets in either track would entail significant transport sector contributions but also because the way in which post-Kyoto mechanisms are defined will determine how well transport sector interventions might qualify for emission credits in developing countries. Under the Kyoto Protocol, only two transport-related project types qualified for the Clean Development Mechanism (CDM) – largely because the type of transport sector interventions that would have had an impact on GHG emissions in developing country urban regions (e.g. development of public transport networks) were ill-suited to CDM methodology (which was more suited to site-specific energy and industrial projects). Nationally Appropriate Mitigation Actions (NAMAs), as currently discussed in the two-track negotiations, might be more amenable to transport policies, especially if programmatic interventions (e.g. on a city-wide transport network) are recognised by the methodology. (For more information on integrating transport-specific concerns in NAMA's, see www.transport2012.org)

One key transport-related outcome of COP-15 concerned the treatment of international aviation and shipping GHG emissions which, due to difficulty in allocating emissions from these global sectors, had been not been addressed in Kyoto GHG reduction targets. The decision was made to postpone the question of national allocation of emissions once again while negotiations continue in the LCA track regarding a global framework for addressing these international emissions. In the post-Copenhagen draft of the LCA agreement, a placeholder paragraph addresses emissions from international marine and aviation bunkers but no targets are agreed. Action within the IMO and ICAO will continue, though the lack of a firm mandate from Copenhagen will likely somewhat dilute efforts to seek rapid resolution on this matter.

Few countries, address transport sector emissions in their national targets although a number of non-Annex-1 countries have identified NAMAs within the transport sector. One important exception is the proposed EU mandatory targets for non ETS sectors which *de facto* include a large transport component (see Table 1-3). Other transport-specific actions include the EU's decision to bring aviation emissions into the EU ETS and transport-specific GHG reduction targets set by Japan and the Netherlands.

Table 1-2: Pledges for nationally appropriate mitigation actions and targets by non Annex I countries as of February 11, 2010 (Copenhagen Accord submissions and prior announced actions)

Brazil	<ul style="list-style-type: none"> -36.1 to -38.9% GHG emissions in 2020 compared to BAU projection
Costa Rica	<ul style="list-style-type: none"> peak in GHG emissions by 2012 become 'carbon neutral' by 2021
China:	<ul style="list-style-type: none"> -40% to -45% CO₂ emissions per unit of GDP from 2005 levels by 2020 (aspirational). Increase share of non-fossil fuels in primary energy consumption to 15% by 2020 (aspirational).
India	<ul style="list-style-type: none"> -20% to -25% CO₂ emissions per unit of GDP from 2005 levels by 2020 (aspirational).
Indonesia	<ul style="list-style-type: none"> -26% GHG emissions from BAU projection by 2025.
Israel	<ul style="list-style-type: none"> -20% CO₂ emissions from BAU projection by 2020 from BAU (aspirational) by increasing share of renewable energy to 10% of total and a 20% reduction in electricity consumption
Maldives	<ul style="list-style-type: none"> Achieve carbon neutrality by 2020
Marshall Islands	<ul style="list-style-type: none"> -40% CO₂ emissions from 2009 levels by 2020.
Mexico	<ul style="list-style-type: none"> -30% GHG emissions from BAU projection by 2020 (aspirational) -50% below 2000 levels by 2050 (aspirational)
Moldova	<ul style="list-style-type: none"> At least -25% reduction from 1990 levels by 2020.
Papua New Guinea	<ul style="list-style-type: none"> -50% GHG emissions from 2009-2010 by 2030. Achieve carbon neutrality by 2050.
Singapore	<ul style="list-style-type: none"> -16% GHG emissions from BAU projection by 2020 (conditional on international agreement)
South Korea	<ul style="list-style-type: none"> -30% GHG emissions from BAU projection by 2020 -50% by 2050
South Africa	<ul style="list-style-type: none"> -34% GHG emissions from BAU projection by 2020 -42% GHG emissions from BAU projection by 2025
The Philippines	<ul style="list-style-type: none"> -5% in 2012 compared to 1990 (aspirational)

Source: National communications, UNFCCC, WRI 2009 and Netherlands Environmental Assessment Agency 2009

Table 1-3: Other Non-Copenhagen Accord-related National and Regional GHG Targets and Actions

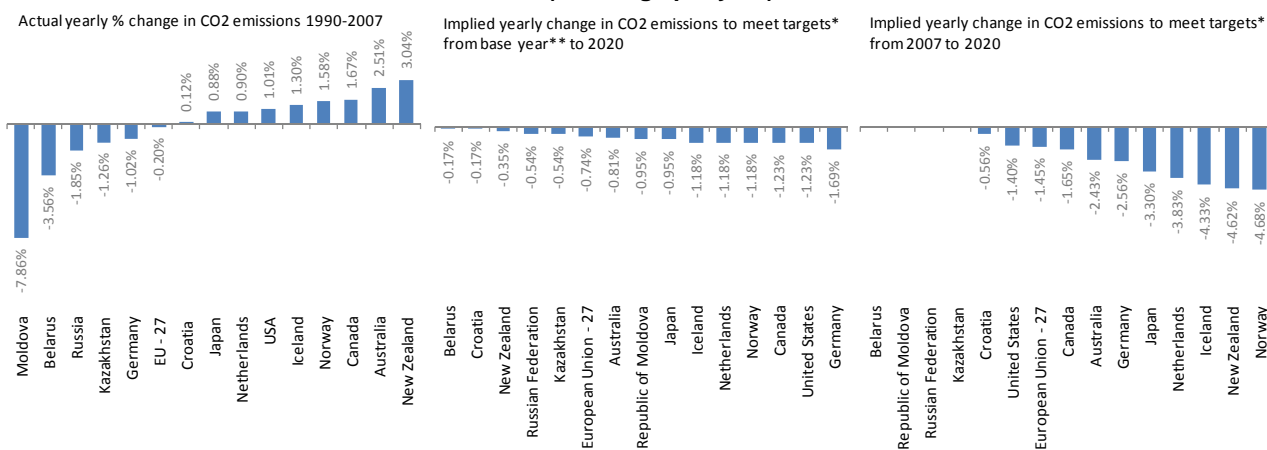
EU	<ul style="list-style-type: none"> • Target to reduce 20% of the EU's total primary energy consumption by 2020 from what it otherwise might have been. • Inclusion of international and domestic aviation emissions in the EU emissions trading system (EU ETS). • An obligation to reach, in aggregate (with different national targets) a 20% share of renewable energy in the EU's final energy consumption by 2020. • An obligation for each member state to reach a target of least 10% renewable energies in transport by 2020. • Proposed mandatory national targets for sectors not covered by the EU ETS (principally Transport, Residential, Agriculture and Waste) from 2005 to 2020 as follows: <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td><i>AUT</i>= -16%</td> <td><i>BEL</i>= -15%</td> <td><i>BGR</i>= +20%</td> <td><i>CZE</i>= +9%</td> <td><i>DEU</i>= -14%</td> </tr> <tr> <td><i>DNK</i>= -20%</td> <td><i>EST</i>= +11%</td> <td><i>FIN</i>= -16%</td> <td><i>FRA</i>= -14%</td> <td><i>GRC</i>= -4%</td> </tr> <tr> <td><i>HUN</i>= +10%</td> <td><i>IRL</i>= -20%</td> <td><i>ITA</i>= -13%</td> <td><i>LVA</i>= +17%</td> <td><i>LTU</i>= +15%</td> </tr> <tr> <td><i>LUX</i>= -20%</td> <td><i>NLD</i>= -16%</td> <td><i>POL</i>= +14%</td> <td><i>PRT</i>= +1%</td> <td><i>ROM</i>= +19%</td> </tr> <tr> <td><i>SVK</i>= +13%</td> <td><i>SVN</i>= +4%</td> <td><i>ESP</i>= -10%</td> <td><i>SWE</i>= -17%</td> <td><i>GBR</i>= -16%</td> </tr> <tr> <td><i>CYP</i>= -5%</td> <td><i>MLT</i>= +5%</td> <td></td> <td></td> <td></td> </tr> </table>	<i>AUT</i> = -16%	<i>BEL</i> = -15%	<i>BGR</i> = +20%	<i>CZE</i> = +9%	<i>DEU</i> = -14%	<i>DNK</i> = -20%	<i>EST</i> = +11%	<i>FIN</i> = -16%	<i>FRA</i> = -14%	<i>GRC</i> = -4%	<i>HUN</i> = +10%	<i>IRL</i> = -20%	<i>ITA</i> = -13%	<i>LVA</i> = +17%	<i>LTU</i> = +15%	<i>LUX</i> = -20%	<i>NLD</i> = -16%	<i>POL</i> = +14%	<i>PRT</i> = +1%	<i>ROM</i> = +19%	<i>SVK</i> = +13%	<i>SVN</i> = +4%	<i>ESP</i> = -10%	<i>SWE</i> = -17%	<i>GBR</i> = -16%	<i>CYP</i> = -5%	<i>MLT</i> = +5%			
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<i>CYP</i> = -5%	<i>MLT</i> = +5%																														
Germany:	<ul style="list-style-type: none"> • -40% GHG emissions from 1990 by 2020 • 12% biofuels by 2020 																														
France:	<ul style="list-style-type: none"> • -75 GHG emissions from 1990 by 2050 • -2%/yr energy intensity improvement (energy consumption to GDP) to 2015 and -2.5%/yr energy intensity improvement from 2015 to 2030. 																														
Iceland	<ul style="list-style-type: none"> • -50-75% from 1990 levels by 2050 (aspirational) 																														
Japan:	<ul style="list-style-type: none"> • -30% energy use from 2003-2030. • Absolute target of 250 Mt CO₂ from transport in 2010 from a baseline of 260 Mt in 2002 (compare to 217 Mt in 1990) which represents 24 Mt below the 2010 "business-as-usual" projection. 																														
Netherlands	<ul style="list-style-type: none"> • -30% GHG emissions from 1990 levels by 2020 • Transport GHG emissions to be cut by 13-17 Mt below the 2020 "business-as-usual projection". • 2% reduction in energy consumption annually. • 20% renewable energy in 2020. 																														
Norway	<ul style="list-style-type: none"> • Carbon neutral by 2030 (aspirational) 																														
Switzerland	<ul style="list-style-type: none"> • -20% GHG emissions by 2020 (-30% if other countries adopt ambitious targets) 																														
Russia	<ul style="list-style-type: none"> • 4% renewable energy by 2020 																														
United Kingdom:	<ul style="list-style-type: none"> • -80% GHG emissions from 2000 levels by 2050 (CO₂) 																														
United States	<ul style="list-style-type: none"> • -30% reduction of GHG emissions in 2025 and a 42% reduction in 2030 from 2005 levels (pending legislative outcome of climate change law) • Reduce GHG emissions 80% from 1990 levels by 2050 (-73% from 1990 in 2050 from cap-and-trade)(pending legislative outcome of climate change law) • Voluntary Federal target of -18% GHG intensity compared to 2002 levels by 2012. • Federal mandate for 9 billion gallons of biofuels in 2008 and 36 billion gallons of biofuels by 2022 																														
<i>California:</i>	<ul style="list-style-type: none"> • -80% GHG emissions from 1990 by 2050 (CO₂) 																														
<i>NE and Mid-Atlantic States (USA):</i>	<ul style="list-style-type: none"> • GHG reduced to 2005 levels by 2009-2012 • minus a further 10% by 2015-2018 																														

Source: National communications, UNFCCC, WRI 2009 and Netherlands Environmental Assessment Agency 2009

Figure 1-12 shows the annualised actual changes in CO₂ emissions and contrasts these with the yearly changes implied by the absolute emission reduction targets set out by some countries (here we examine the lower ambition pledges when countries have provided a range of efforts). As noted earlier, several economies in transition have seen large drops in emissions from 1990. These countries are currently below their 2020 emissions target and, if they can contain future emissions, should meet these (Belarus, Kazakhstan, Moldova and Russia). While not displayed here, this is also the case for several new EU Members as well. Germany (-1.69% per year from 1990 to 2020 for a total of -40%) has the most challenging yearly reduction burden of the countries examined here though the implied emission reduction rate of the United States, Canada, Norway, the Netherlands and Iceland are all above 1% per year. The EU 27 has a relatively easier burden at only -0.74% per year though this reflects early action undertaken to reduce emissions since 1990 (compared to the 2005 baseline chosen by the United States and Canada which does not account for emissions growth from 1990 to 2005).

From 2007 on to 2020, those countries that have seen emissions rise fastest from 1990 to 2007 and those countries which have selected ambitious reduction targets will face a significant yearly reduction burden (over 3% reduction in emissions per year for Norway, New Zealand, Iceland and Japan). The EU, the United States and Canada all face roughly similar yearly reduction rates though they have different base year dates. When looking at a common 1990 baseline, the emissions reduction pledge of the United States are significantly smaller than those of the EU and Japan.

Figure 1-12: Level of effort implied by recent national GHG targets and emission reduction commitments (% change per year)



* Targets selected from the lower end of the range of announced targets with the exception of the mid-range target for Australia (see Table 1-1, Table 1-2 and Table 1-3 **Error! Reference source not found.**)

** 1990 is the base year for all countries represented here except Australia (2000) and the United States and Canada (both 2005)

Source: Emissions data from IEA, targets from UNFCCC

According to analysis by the World Resources Institute, the EU, Japan and the US each face roughly similar efforts in terms of reduction of overall per-capita GHG emissions implied by the 2020 CA targets (-24%, -24% and -29%, respectively) when compared to 1990 levels though when compared to 2005 emissions, the EU's burden (-14%) is roughly half that of Japan and the US (-26% and -27%, respectively) highlighting early emissions reduction in the EU. In terms of the GHG intensity of their respective economies, the CA targets imply slightly less similar levels of GHG intensity reduction per unit of GDP for all three regions (-58%, -61% and -53%, respectively, for the EU, Japan and the United States in a fast GDP growth scenario from 1990 levels and -39%, -48% and -43%, respectively, from 2005 levels). In all cases (slow vs. fast growth, 1990 baseline vs. 2005 baseline) the effort implied is

significant – the carbon productivity of the economy will have to improve by ~30% to over 50% with Japan facing the highest burden in these three regions (Levin & Bradley, 2010). Perhaps more important than the level of effort implied by these commitments is the fact that in almost all instances, countries will have to either reverse CO₂ emission trends or accelerate emission reductions already underway. Meeting these commitments will imply significant and growing efforts from the transport sector.

1.1.2. Implied climate stabilisation impacts and carbon costs of targets, pledges and actions

Bearing in mind the inherent difficulties and imprecision in linking emissions reductions to climate change impacts (especially against BAU projections for a future date), a number of efforts have sought to gauge if COP 15 pledges would more-or-less meet a 2° climate goal.

In October 2009, the Netherlands Environmental Assessment Agency released a report examining what impact current targets, pledges and actions would have on climate stabilisation goals and global abatement costs and carbon prices (den Elzen, Mendoza-Beltran, van Vliet, Bakker, & Bole, 2009). It examines the pledges made in the Copenhagen round of climate talks (as of August 2009) and assesses these against a 450 ppm CO₂eq. target. This trajectory would require cuts in emissions from Annex I countries on the order of 25% to 40% along with GHG emission cuts of 15%-30% from developing countries – mainly from a small set of large-emitting and fast growing States.

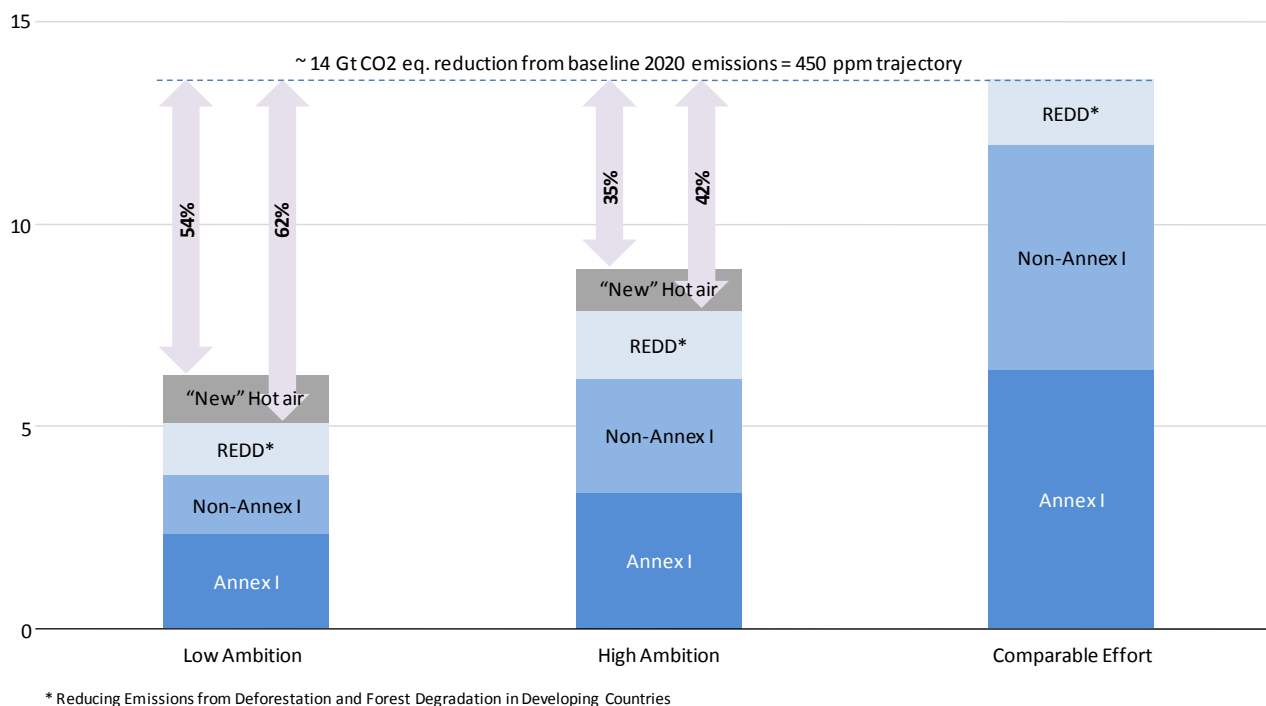
The study examines three scenarios. The first is based on emission cuts along the lower range of existing pledges (“low ambition”), the second examines the impact of emission cuts along the high range of existing pledges and planned actions (“higher ambition” and the final scenario assumes emission cuts such that the 2° limit has a good chance of not being surpassed on the basis of “comparable efforts” amongst Annex I countries⁸ (-30% from 1990) and ambitious non-Annex I countries (-16% excluding LULCF⁹ and REDD¹⁰, and -19% including these). Figure 1-13 shows the potential emission reductions from each scenario in 2020 – keeping in mind that approximately a reduction of approximately 14 GtCO₂ eq. would be more-or-less in line with the 450 ppm stabilisation trajectory.

8. The notion of “comparable efforts” is one further developed in another report of the Netherlands Environmental Assessment Agency “Invalid source specified..

9. Land Use, Land Use Change and Forestry CO₂ emissions

10. Reducing Emissions from Deforestation and Forest Degradation in Developing countries

Figure 1-13: Modelled impact of 2009 (August) GHG emission reduction pledges, targets and actions



Source: (den Elzen, Mendoza-Beltran, van Vliet, Bakker, & Bole, 2009)

According to (den Elzen, Mendoza-Beltran, van Vliet, Bakker, & Bole, 2009), both the low and high pledges of Annex I countries as of August 2009 would lead to 10%-15% less GHG emissions than the 1990 baseline (-11% to -16% including the Japanese government pledge to reduce GHG emissions by 25% from 1990 levels). If the new surplus “Hot air” resulting from Russia and Ukraine having submitted pledges above baseline levels is not used, the potential Annex I reduction increases to 14% to 19% below the baseline level. In all cases, the study finds that pledges from Annex I countries are significantly less than the -25% to -40% reduction implied by the 450 ppm stabilisation scenario. Overall, combined Annex I and non-Annex I efforts fall between 54%-62% short of emission reduction compatible with a 450 ppm stabilisation trajectory in the low ambition scenario and between 35%-42% short in the higher ambition scenario. The study finds, however, that some countries and regions are closer to the levels of reduction modelled under the “comparable effort” scenario which would keep to a 450 ppm stabilisation trajectory. This is the case for the high pledges of the EU, the US and Japan (Figure 1-12).

Conservative estimates of reduction actions that could be undertaken by non-Annex I countries (excluding land use- and forestry-related actions) would lead to an emissions reduction of large and/or fast growing emerging economies in the order of 5%-11% below the 1990 baseline. This too is less than the -15% to -30% emission reduction from developing countries in order to assure a 450 ppm stabilisation trajectory.

More recently, the Potsdam Institute for Climate Impact Research (PIK) has assessed COP-15 pledges and actions by developed and developing countries estimating that these would result in the following reductions (Hohne, et al., 2009):

- Developed countries: from minus 2.3 GtCO₂eq in 2020 for low ambition pledges to 5.4GtCO₂eq for high ambition pledges.
- Developing countries: minus 3.6GtCO₂eq in an “optimistic” interpretation of the impact of identified NAMAs.

When measured against a projected global BAU estimate of 57 GtCO₂eq in 2020 finds that COP 15 pledges and actions (9GtCO₂eq) are insufficient to meet an emissions reduction trajectory that would have a good chance to limit warming to 2°C (44GtCO₂eq in 2020 -- 450ppm atmospheric concentration). Under low-ambition pledges, PIK suggests that average global temperatures might rise by 3.5°C by 2100 (representing an atmospheric GHG concentration of 700 ppm) and under the most ambitious scenario joining developed country high pledges and developing country NAMAs, temperature change might be reduced to 3.2°C (650 ppm) by 2100 (Hohne, et al., 2009).

Other estimates of the impact of post-Copenhagen pledges and actions by the World Resources Institute and MIT’s Sustainability Institute also find that emissions trajectories are set to exceed the 2°C objective, with MIT’s Sustainability Center projecting an increase of 3.9°C by 2100. UNEP, reviewing available studies in February 2010 notes that there is “low confidence (e.g. a two in ten chance) that the two degree limit will be met under current commitment/mitigation actions to reduce emissions listed in the Copenhagen Accord” (UNEP, 2010).

(den Elzen, Mendoza-Beltran, van Vliet, Bakker, & Bole, 2009) finds that the costs associated with Annex I pledges and targets would represent approximately 0.01% to 0.04%, respectively, of GDP in 2020 for the low and higher ambition scenarios. The “comparable effort” scenario which would be consistent with not surpassing 2° would cost approximately 0.24% of Annex I country GDP. These are averaged values and the study finds that abatement costs would differ significantly between certain countries. If emission reduction only takes place domestically (e.g. no international emissions trading), costs are projected to multiply by a factor of 4 to 13.

The study estimates that abatement costs as a percentage of GDP are lower in developing countries and that some countries may experience net gains if trading is allowed. Again, certain developing countries would possibly face higher abatement costs than others. For example, under the “comparable effort” scenario, advanced developing countries may face costs as high as 0.3% to 0.5% of GDP which is as high as or higher than Annex I abatement costs under the same scenario. This implies that these countries might compete with Annex I countries for emission credits if they participate in an international trading scheme.

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APPENDIX 1

Composition of world regions used in this report:

EU-15 (countries belonging to the EU prior to May 1, 2004)

⇒ Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland (Republic of), Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom

EU-New (The 12 countries having joined the EU since May 1, 2004)

⇒ Bulgaria, Cyprus¹¹, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia

International Transport Forum - North America

⇒ Canada, Mexico, United States

International Transport Forum - Asia Pacific

⇒ Australia, Japan, Korea, New Zealand

International Transport Forum - Other

⇒ Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Croatia, FYR Macedonia, Georgia, Iceland, India, Moldova, Montenegro, Norway, Russia, Serbia, Switzerland, Turkey, Ukraine

10 Top CO2 Emitting non International Transport Forum Countries

⇒ China (including Hong Kong), Islamic Republic of Iran, Indonesia, South Africa, Brazil, Saudi Arabia, Chinese Taipei, Thailand, Kazakhstan, Malaysia

11. Southern part of the island as there is no single authority representing the whole of the island.

APPENDIX 2

National Transport-Related and GHG Emissions Data:

These tables contain detailed data on Greenhouse Gas (GHG) emissions and carbon dioxide (CO₂) emissions from fossil fuel combustion in member countries of the International Transport Forum.

A number of data sources are used in these tables:

Population and GDP data are from the International Energy Agency. GDP data is expressed in purchasing power parity (2000 \$).

Data on transport volumes (passenger-kilometres and tonne-kilometres) are collected from national administrations by the Statistics division of the International Transport Forum.

Data on motorisation rates comes from the World Bank.

Data on Greenhouse Gas Emissions (and CO₂ emissions in particular) come from national reports to the United Nations Framework Convention on Climate Change (UNFCCC) and from the International Energy Agency.

International Energy Agency (IEA) energy figures are based on the default methods and emissions factors from the Revised 1996 IPCC (Intergovernmental Panel on Climate Change) Guidelines for National Greenhouse Gas Inventories.

Important Cautionary Note:

There are many reasons why the IEA estimates may not be the same as the numbers that a country submits to the United Nations Framework Convention on Climate Change (UNFCCC), even if a country has accounted for all of its energy use and correctly applied the IPCC Guidelines. In addition, the IEA presents CO₂ emissions calculated using both the IPCC Reference Approach and the IPCC Tier 1 Sectoral Approach. In some of the non-OECD countries, there can be large differences between the two sets of calculations due to various problems in some energy data. As a consequence, this can lead to different emission trends between 1990 and 1999 for certain countries. For more details, visit the IEA web-site.

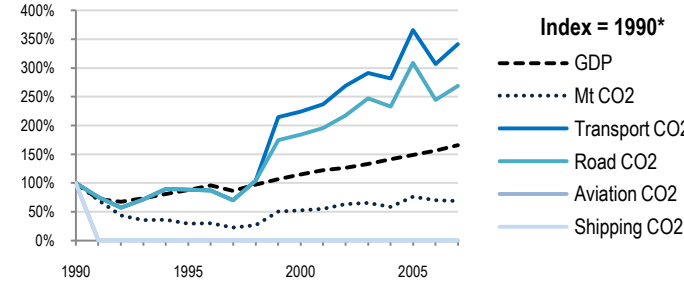
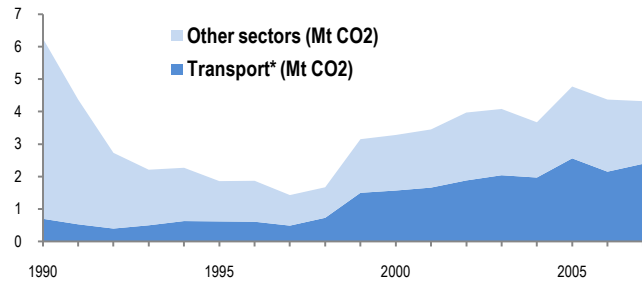
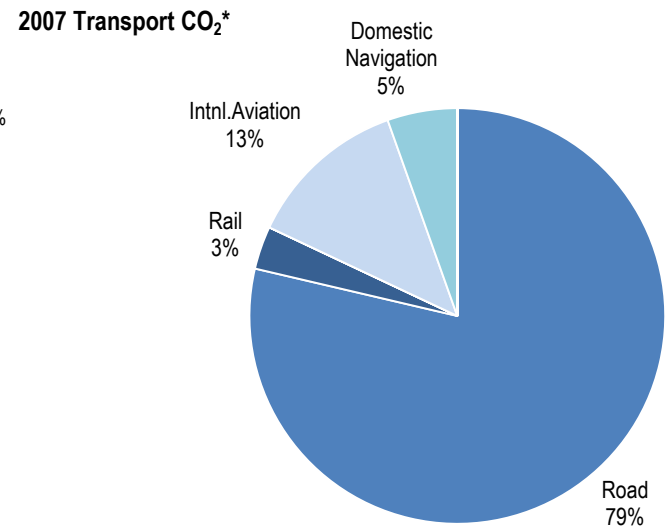
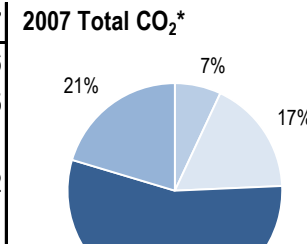
INTERNATIONAL TRANSPORT FORUM MEMBERS

Country Sheets

Albania

EU-27 N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-31%	4.32	-28%	1.36	-58%	0.26
Transport CO ₂	241%	2.39	253%	0.75	106%	0.15
Road CO ₂	169%	1.88	178%	0.59	62%	0.11
Aviation CO ₂	..	0.3	..	0.09	..	0.02
Shipping CO ₂	..	0.13	..	0.04	..	0.01



Transport and the Economy

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	3.29	3.15	3.08	3.09	3.10	3.12	3.13	3.15	3.17	3.18	-3%	-0.20%
GDP PPP (billion 2000 US dollars)	9.93	8.73	11.39	12.18	12.54	13.25	14.03	14.80	15.55	16.48	66%	3.02%
Road passenger km (million pkm)	2174	4955	5299	5370	6065	6495	6481	6925	7350	7040	224%	7.16%
Road and Rail freight tkm (million tkm)	1779	2130	2192	2250	2373	2562	2830	3236	3342	3637	104%	4.30%
Road pkm/capita	660.79	1573.02	1720.45	1737.86	1956.45	2081.73	2070.61	2198.41	2318.61	2213.84	235%	7.37%
Road and Rail freight tkm/\$ of GDP	0.18	0.24	0.19	0.18	0.19	0.19	0.20	0.22	0.21	0.22	23%	1.23%
Passenger cars per 1000 inhabitants	2	18	37	44	48	..	61	62	71	..	..	24.99%

CO2 Emissions

IEA CO ₂ from fuel combustion (Mt)*	6.25	1.86	3.28	3.45	3.97	4.08	3.67	4.77	4.37	4.32	-31%	-2.15%
... of which transport CO ₂ (Mt)*	0.7	0.62	1.57	1.66	1.88	2.04	1.97	2.56	2.15	2.39	241%	7.49%
Transport* as a percentage of total	11.2%	33.3%	47.9%	48.1%	47.4%	50.0%	53.7%	53.7%	49.2%	55.3%	..	..
Road (Mt)	0.7	0.62	1.29	1.37	1.52	1.73	1.63	2.16	1.71	1.88	169%	5.98%
Rail (Mt)	0	0	0.1	0.09	0.09	0.09	0.09	0.06	0.06	0.08	..	..
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0	0	0.12	0.13	0.13	0.14	0.17	0.21	0.25	0.3	..	13.99%
Domestic Navigation (Mt)	0	0	0.07	0.07	0.13	0.09	0.07	0.13	0.13	0.13	..	9.25%
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..

GHG Emissions

UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Armenia

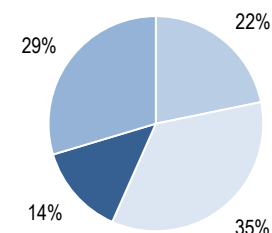
EU-27 N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-76%	4.96	-72%	1.65	-85%	0.29
Transport CO ₂	-81%	0.68	-77%	0.23	-88%	0.04
Road CO ₂	-83%	0.51	-79%	0.17	-89%	0.03
Aviation CO ₂	-71%	0.17	-66%	0.06	-81%	0.01
Shipping CO ₂	..	0	..	0.00	..	0.00

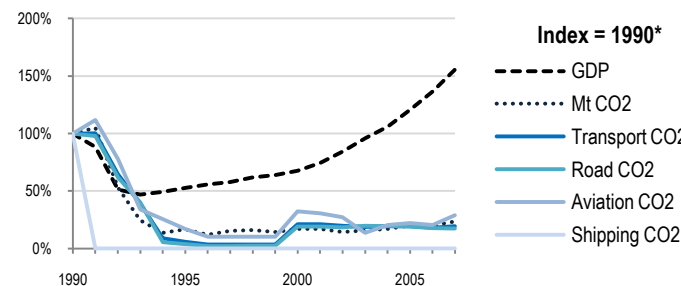
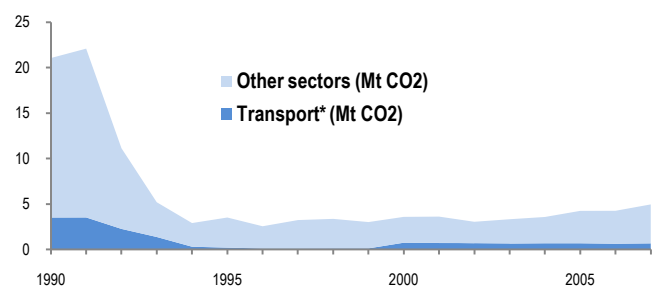
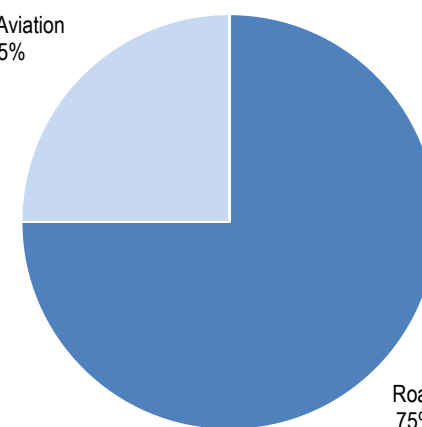
4.9 Mt

2007 Total CO₂*

2007 Transport CO₂*



Intl. Aviation
25%



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	3.55	3.23	3.08	3.07	3.05	3.04	3.03	3.02	3.01	3.00	-15%	-0.99%
GDP PPP (billion 2000 US dollars)	11.01	5.81	7.46	8.18	9.26	10.55	11.66	13.28	15.04	17.11	55%	2.63%
Road passenger km (million pkm)	0	0	1437	1678	1813	1959	2066	2223	2436	2521	..	8.36%
Road and Rail freight tkm (million tkm)	0	0	354	487	657	809	888	885	1100	1481	..	22.69%
Road pkm/capita	0.00	0.00	466.56	546.58	594.43	644.41	681.85	736.09	809.30	840.33	..	8.77%
Road and Rail freight tkm/\$ of GDP	0.00	0.00	0.05	0.06	0.07	0.08	0.08	0.07	0.07	0.09	..	8.97%
Passenger cars per 1000 inhabitants	1	0	..	..	..	..	..	..	..	..	..	..
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	21.05	3.52	3.59	3.62	3.05	3.33	3.58	4.25	4.26	4.96	-76%	-8.15%
... of which transport CO ₂ (Mt)*	3.52	0.21	0.75	0.74	0.7	0.66	0.69	0.69	0.64	0.68	-81%	-9.22%
Transport* as a percentage of total	16.7%	6.0%	20.9%	20.4%	23.0%	19.8%	19.3%	16.2%	15.0%	13.7%		
Road (Mt)	2.93	0.11	0.56	0.56	0.54	0.58	0.57	0.56	0.52	0.51	-83%	-9.77%
Rail (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0.59	0.1	0.19	0.18	0.16	0.08	0.12	0.13	0.12	0.17	-71%	-7.06%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Australia

EU-27

N. America

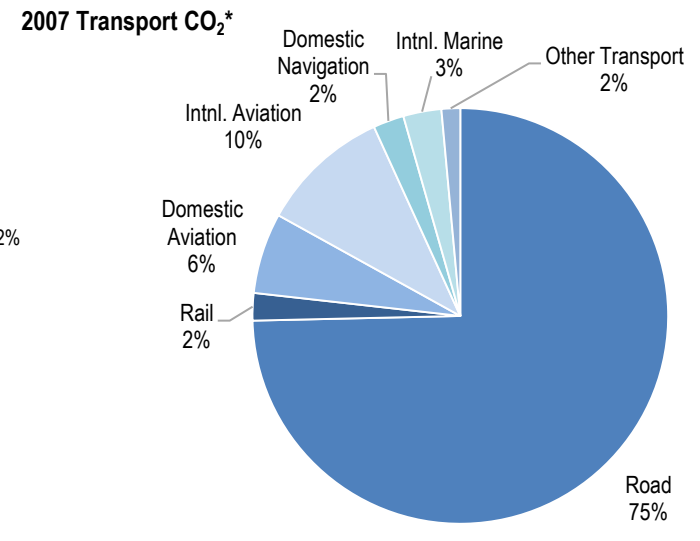
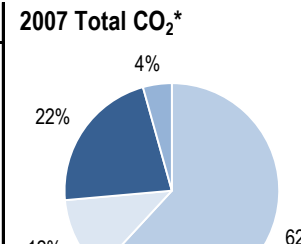
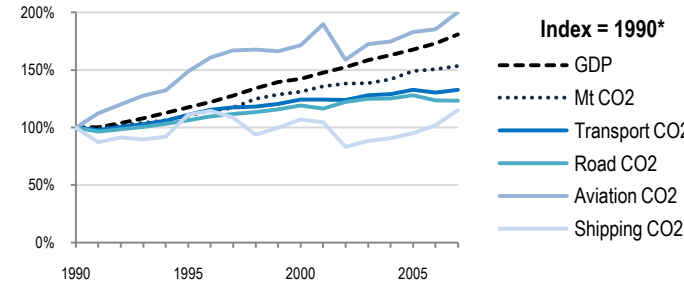
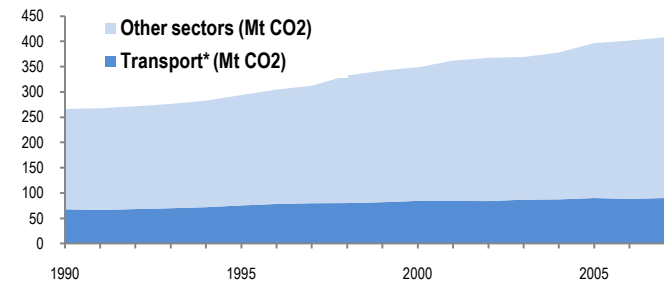
Asia-Pacific

ITF-other

Top 10 non-ITF

408.1 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	53%	408.06	24%	19.30	-15%	0.61
Transport CO ₂	33%	90.07	8%	4.26	-27%	0.14
Road CO ₂	23%	67.23	0%	3.18	-32%	0.10
Aviation CO ₂	100%	14.78	63%	0.70	11%	0.02
Shipping CO ₂	15%	4.83	-7%	0.23	-36%	0.01



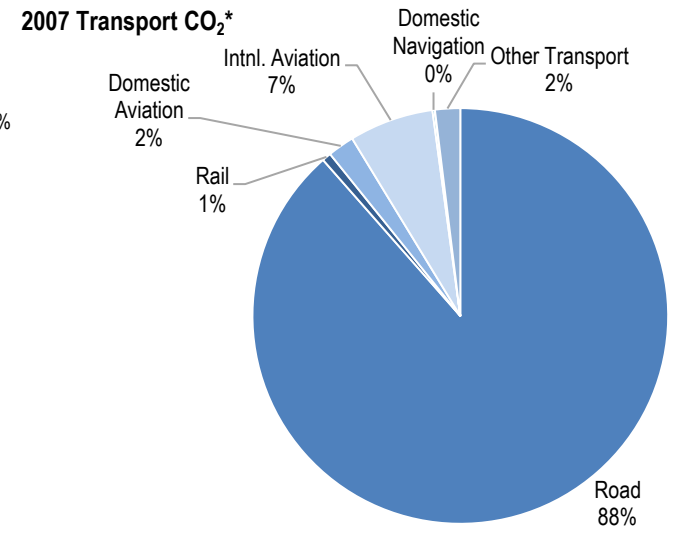
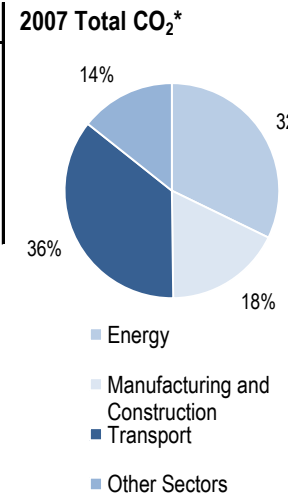
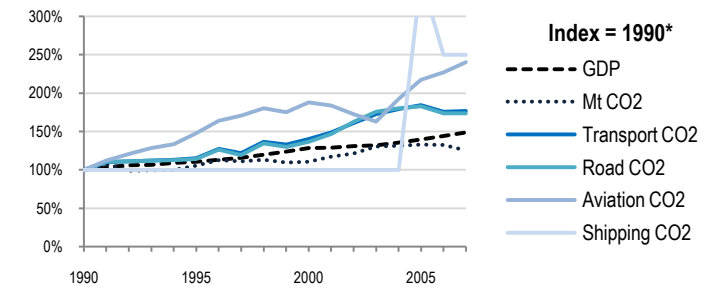
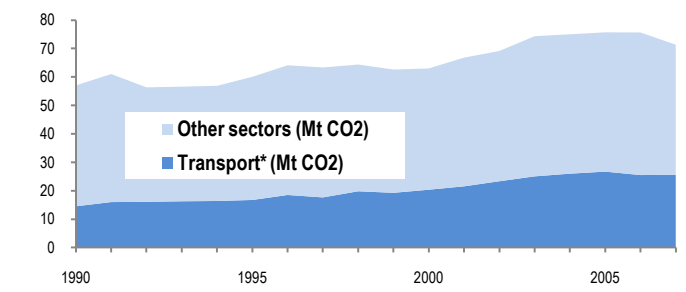
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	17.17	18.19	19.27	19.53	19.75	19.99	20.23	20.53	20.82	21.14	23%	1.23%
GDP PPP (billion 2000 US dollars)	369.00	433.48	524.77	544.54	561.71	584.32	600.97	618.72	638.43	666.78	81%	3.54%
Road passenger km (million pkm)	218200	239832	257906	255942	261879	268378	278350	279111	277516	282362	29%	1.53%
Road and Rail freight tkm (million tkm)	169548	212469	265848	274091	292746	307314	322122	344702	357360	376143	122%	4.80%
Road pkm/capita	12708.21	13184.83	13383.81	13105.07	13259.70	13425.61	13759.27	13595.28	13329.30	13356.76	5%	0.29%
Road and Rail freight tkm/\$ of GDP	0.46	0.49	0.51	0.50	0.52	0.53	0.54	0.56	0.56	0.56	23%	1.21%
Passenger cars per 1000 inhabitants	450	478	..	..	..	524	531	542	..	..	..	1.25%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	266.24	293.73	348.77	361.78	367.43	369.02	377.9	396.68	401.52	408.06	53%	2.54%
... of which transport CO ₂ (Mt)*	67.82	75.39	84.36	84.18	84.05	86.8	87.37	90.02	88.31	90.07	33%	1.68%
Transport* as a percentage of total	25.5%	25.7%	24.2%	23.3%	22.9%	23.5%	23.1%	22.7%	22.0%	22.1%		
Road (Mt)	54.5	57.84	64.92	63.45	66.62	68.15	68.28	69.66	67.27	67.23	23%	1.24%
Rail (Mt)	1.71	1.52	1.79	1.81	1.48	1.52	1.63	2.09	1.86	1.92	12%	0.68%
Domestic Aviation (Mt)	3.09	5.23	5.49	6.04	5.44	5.87	5.99	5.41	6.38	5.65	83%	3.61%
International Aviation (Mt)	4.29	5.75	7.15	7.95	6.29	6.86	6.92	8.1	7.29	9.13	113%	4.54%
Domestic Navigation (Mt)	2.06	1.87	1.53	1.82	1.1	1.31	1.06	1.19	1.07	2.16	5%	0.28%
International Shipping (Mt)	2.14	2.79	2.96	2.57	2.4	2.4	2.75	2.81	3.21	2.67	25%	1.31%
Other Transport (Mt)	0.02	0.4	0.52	0.53	0.72	0.7	0.73	0.76	1.23	1.31	6450%	27.89%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	422.67	450.05	505.04	516.22	516.80	524.69	530.94	534.19	545.25	553.17	31%	1.60%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	263.68	290.32	335.98	342.18	345.96	358.78	363.61	369.69	376.53	382.50	45%	2.21%
... of which transport GHG (Mt CO ₂ eq.)*	68.55	76.84	85.09	84.02	84.87	84.59	88.65	88.56	89.42	90.77	32%	1.67%
Road (Mt)	54.33	58.88	65.92	64.41	66.68	67.37	70.79	69.58	68.84	68.53	26%	1.38%
International Aviation (Mt)	4.38	5.90	7.39	7.86	6.75	5.97	6.03	6.90	8.12	9.35	113%	4.56%
International Shipping (Mt)	2.08	2.70	2.80	2.63	2.87	2.79	2.82	2.65	2.65	2.65	27%	1.43%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Austria

EU-27 | N. America | Asia-Pacific | ITF-other | Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007	2007 Total CO ₂ *
Total CO ₂	25%	71.34	15%	8.57	-16%	0.27	
Transport CO ₂	77%	25.6	63%	3.08	19%	0.10	
Road CO ₂	74%	22.66	60%	2.72	17%	0.09	
Aviation CO ₂	140%	2.21	122%	0.27	62%	0.01	
Shipping CO ₂	150%	0.05	131%	0.01	68%	0.00	



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	7.68	7.95	8.01	8.04	8.08	8.12	8.18	8.23	8.28	8.32	8%	0.47%
GDP PPP (billion 2000 US dollars)	179.49	198.73	230.22	231.42	235.23	237.12	243.15	250.14	258.58	266.51	48%	2.35%
Road passenger km (million pkm)	67722	0	0	0	0	0	0	0	0	0	..	..
Road and Rail freight tkm (million tkm)	21697	28594	33756	34451	34959	35010	35310	33953	39825	40019	84%	3.67%
Road pkm/capita	8817.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..
Road and Rail freight tkm/\$ of GDP	0.12	0.14	0.15	0.15	0.15	0.15	0.15	0.14	0.15	0.15	24%	1.28%
Passenger cars per 1000 inhabitants	387	447	501	520	493	499	503	..	507	..	..	1.70%
CO₂ Emissions												
IEA CO ₂ from fuel combustion (Mt)*	57.02	60.04	63	66.79	69.13	74.34	75	75.7	75.64	71.34	25%	1.33%
... of which transport CO ₂ (Mt)*	14.5	16.73	20.34	21.53	23.32	25.03	25.98	26.7	25.49	25.6	77%	3.40%
Transport* as a percentage of total	25.4%	27.9%	32.3%	32.2%	33.7%	33.7%	34.6%	35.3%	33.7%	35.9%		
Road (Mt)	13.06	14.93	17.84	19.17	21.25	22.95	23.56	23.85	22.67	22.66	74%	3.29%
Rail (Mt)	0.18	0.14	0.14	0.14	0.14	0.15	0.15	0.18	0.18	0.18	0%	0.00%
Domestic Aviation (Mt)	0.1	0.07	0.1	0.12	0.12	0.24	0.29	0.33	0.34	0.53	430%	10.31%
International Aviation (Mt)	0.82	1.29	1.63	1.57	1.47	1.26	1.48	1.67	1.75	1.68	105%	4.31%
Domestic Navigation (Mt)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.07	0.05	0.05	150%	5.54%
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0.32	0.28	0.61	0.53	0.33	0.43	0.49	0.59	0.5	0.5	56%	2.66%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	79.93	81.85	82.79	86.75	88.59	94.58	93.52	94.81	93.59	90.16	13%	0.71%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	56.00	58.67	60.57	64.74	66.05	72.04	71.94	73.01	71.19	67.40	20%	1.10%
... of which transport GHG (Mt CO ₂ eq.)*	14.92	17.34	20.84	22.03	23.85	25.58	26.46	27.32	26.04	26.42	77%	3.42%
Road (Mt)	13.53	15.47	18.25	19.58	21.69	23.44	23.97	24.48	23.20	23.46	73%	3.29%
International Aviation (Mt)	0.90	1.34	1.71	1.67	1.56	1.47	1.74	1.98	2.07	2.20	145%	5.42%
International Shipping (Mt)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

REDUCING TRANSPORT GHG EMISSIONS - Trends & Data 2010. © OECD/ITF 2010

Azerbaijan

EU-27

N. America

Asia-Pacific

ITF-other

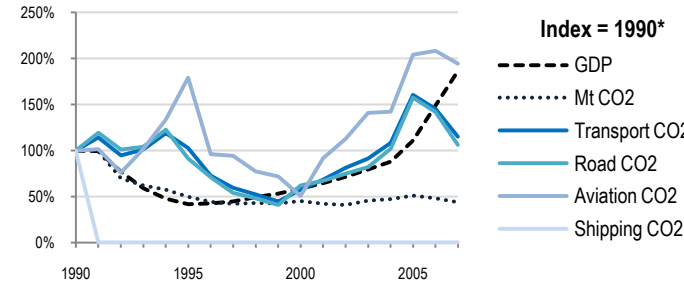
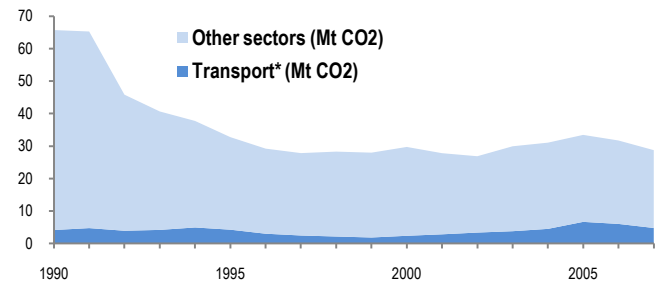
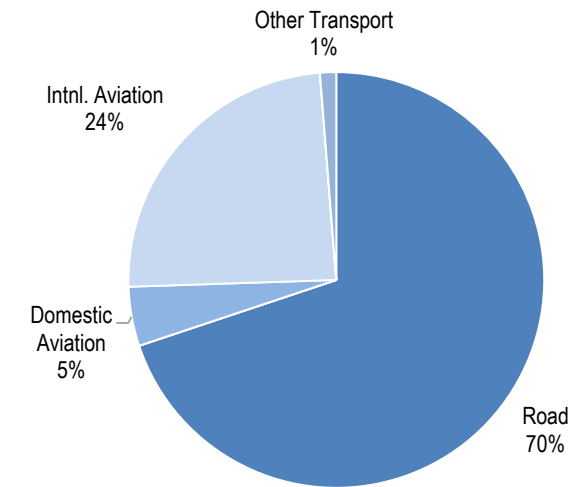
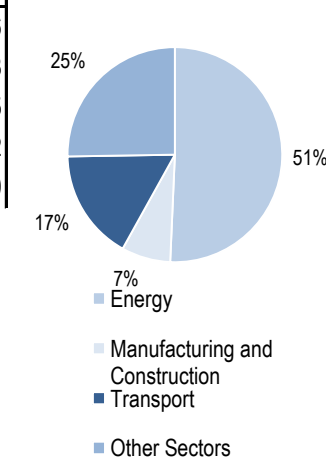
Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-56%	28.74	-63%	3.35	-77%	0.46
Transport CO ₂	15%	4.79	-4%	0.56	-38%	0.08
Road CO ₂	6%	3.34	-11%	0.39	-43%	0.05
Aviation CO ₂	94%	1.38	62%	0.16	4%	0.02
Shipping CO ₂	..	0	..	0.00	..	0.00

28.7 Mt

2007 Total CO₂*

2007 Transport CO₂*



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	7.16	7.69	8.05	8.11	8.17	8.23	8.31	8.39	8.48	8.57	20%	1.06%
GDP PPP (billion 2000 US dollars)	33.83	14.16	19.92	21.90	24.22	26.93	29.68	37.51	50.45	63.06	86%	3.73%
Road passenger km (million pkm)	7480	4664	9153	9442	9603	9861	10279	10892	11786	12893	72%	3.25%
Road and Rail freight tkm (million tkm)	40363	4258	9451	11251	12807	14262	14814	17498	19627	19867	-51%	-4.08%
Road pkm/capita	1044.69	606.50	1137.02	1164.24	1175.40	1198.18	1236.94	1298.21	1389.86	1504.43	44%	2.17%
Road and Rail freight tkm/\$ of GDP	1.19	0.30	0.47	0.51	0.53	0.53	0.50	0.47	0.39	0.32	-74%	-7.53%
Passenger cars per 1000 inhabitants	36	36	41	42	43	49	53	57	..	..	..	3.11%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	65.7	32.75	29.73	27.81	26.87	29.93	31.05	33.44	31.71	28.74	-56%	-4.75%
... of which transport CO ₂ (Mt)*	4.16	4.27	2.39	2.84	3.38	3.8	4.51	6.67	6.04	4.79	15%	0.83%
Transport* as a percentage of total	6.3%	13.0%	8.0%	10.2%	12.6%	12.7%	14.5%	19.9%	19.0%	16.7%		
Road (Mt)	3.15	2.87	1.96	2.11	2.35	2.58	3.21	4.96	4.47	3.34	6%	0.35%
Rail (Mt)	0	0.04	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0.22	..	..
International Aviation (Mt)	0.71	1.27	0.36	0.65	0.8	1	1.01	1.45	1.48	1.16	63%	2.93%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0.3	0.09	0.06	0.07	0.23	0.21	0.28	0.27	0.09	0.06	-80%	-9.03%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Belarus

EU-27

N. America

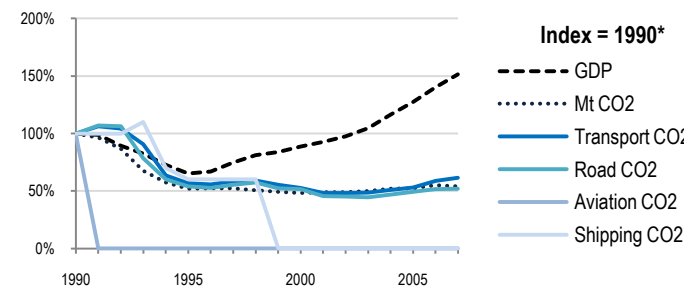
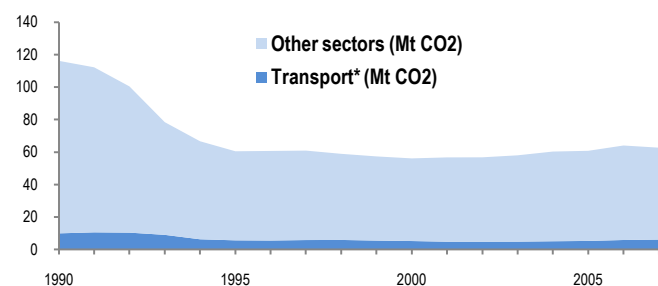
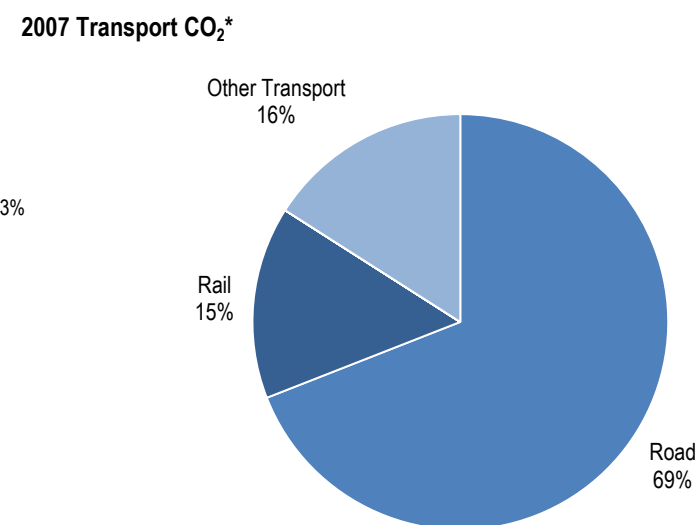
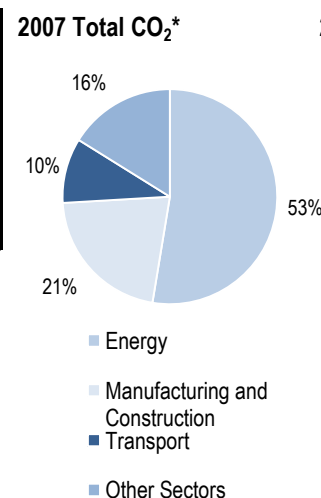
Asia-Pacific

ITF-other

Top 10 non-ITF

62.7

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-46%	62.7	-43%	6.46	-64%	0.76
Transport CO ₂	-38%	6.14	-35%	0.63	-59%	0.07
Road CO ₂	-48%	4.24	-45%	0.44	-66%	0.05
Aviation CO ₂	..	0	..	0.00	..	0.00
Shipping CO ₂	-100%	0	-100%	0.00	-100%	0.00



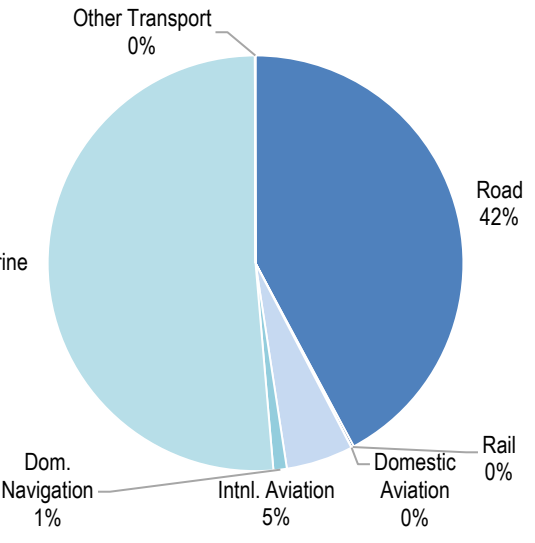
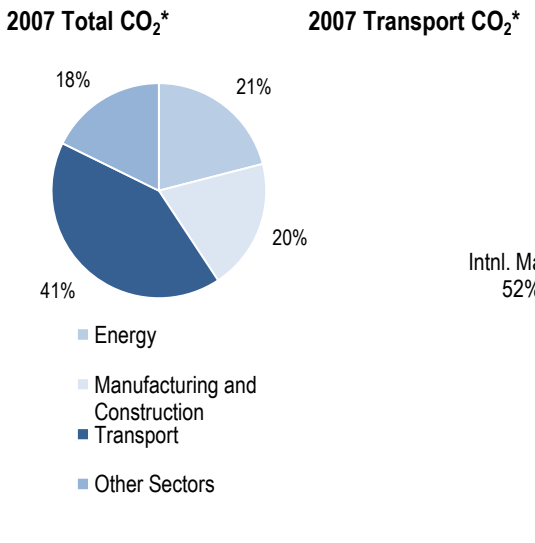
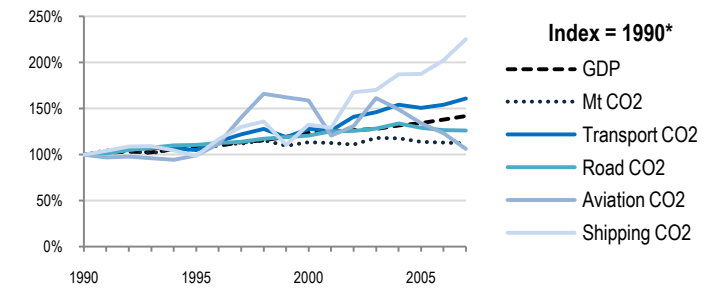
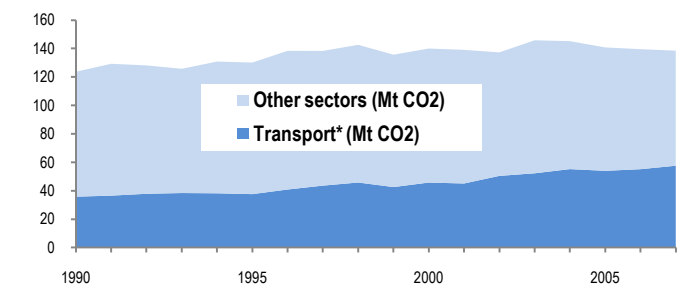
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	10.19	10.19	10.01	9.97	9.93	9.87	9.82	9.78	9.73	9.70	-5%	-0.29%
GDP PPP (billion 2000 US dollars)	54.19	35.38	48.05	50.32	52.86	56.59	63.06	69.02	75.92	82.11	52%	2.47%
Road passenger km (million pkm)	19787	9308	9235	9493	9397	9768	9382	9231	9343	9353	-53%	-4.31%
Road and Rail freight tkm (million tkm)	97791	35049	41170	39968	45569	51112	54300	58604	61502	67133	-31%	-2.19%
Road pkm/capita	1941.81	913.44	922.58	952.16	946.32	989.67	955.40	943.87	960.23	964.23	-50%	-4.03%
Road and Rail freight tkm/\$ of GDP	1.80	0.99	0.86	0.79	0.86	0.90	0.86	0.85	0.81	0.82	-55%	-4.55%
Passenger cars per 1000 inhabitants	59	92	142	147	156	168	174	181	183	..	..	7.33%
CO₂ Emissions												
IEA CO ₂ from fuel combustion (Mt)*	116.14	60.49	56.11	56.71	56.76	57.99	60.31	60.76	64.04	62.7	-46%	-3.56%
... of which transport CO ₂ (Mt)*	9.97	5.67	5.24	4.83	4.81	4.85	5.1	5.3	5.88	6.14	-38%	-2.81%
Transport* as a percentage of total	8.6%	9.4%	9.3%	8.5%	8.5%	8.4%	8.5%	8.7%	9.2%	9.8%	..	..
Road (Mt)	8.14	4.41	4.22	3.7	3.68	3.64	3.81	4.02	4.2	4.24	-48%	-3.76%
Rail (Mt)	1.56	1.09	0.72	0.81	0.69	0.72	0.76	0.82	0.89	0.92	-41%	-3.06%
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Domestic Navigation (Mt)	0.1	0.06	0	0	0	0	0	0	0	0	-100%	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0.16	0.1	0.3	0.32	0.43	0.49	0.54	0.47	0.8	0.98	513%	11.25%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	134.74	74.35	71.19	69.71	69.75	71.41	76.10	77.65	81.49	80.17	-40%	-3.01%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	106.61	56.01	51.21	50.35	50.43	50.40	53.73	53.90	56.12	54.51	-49%	-3.87%
... of which transport GHG (Mt CO ₂ eq.)*	18.68	5.08	3.30	3.32	4.43	4.15	4.68	4.69	5.83	5.85	-69%	-6.61%
Road (Mt)	13.02	4.46	2.10	2.08	3.04	2.63	3.14	3.24	4.07	3.93	-70%	-6.80%
International Aviation (Mt)	5.61	0.21	0.19	0.21	0.25	0.28	0.27	0.21	0.16	0.16	-97%	-18.77%
International Shipping (Mt)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Belgium

EU-27 138.5 Mt | N. America | Asia-Pacific | ITF-other | Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	12%	138.49	5%	13.04	-21%	0.43
Transport CO ₂	61%	57.56	51%	5.42	13%	0.18
Road CO ₂	26%	24.27	18%	2.29	-11%	0.08
Aviation CO ₂	6%	3.01	-1%	0.28	-25%	0.01
Shipping CO ₂	125%	30.14	112%	2.84	59%	0.09



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	9.97	10.14	10.25	10.28	10.33	10.37	10.42	10.47	10.54	10.62	7%	0.37%
GDP PPP (billion 2000 US dollars)	228.17	246.93	282.18	284.42	288.71	291.57	300.22	305.77	314.90	323.58	42%	2.08%
Road passenger km (million pkm)	92158	104228	119400	121470	123960	124730	126800	126960	127990	132300	44%	2.15%
Road and Rail freight tkm (million tkm)	40403	54423	58697	60238	60814	57835	55569	51888	51604	50233	24%	1.29%
Road pkm/capita	9243.53	10278.90	11648.78	11816.15	12000.00	12027.97	12168.91	12126.07	12143.26	12457.63	35%	1.77%
Road and Rail freight tkm/\$ of GDP	0.18	0.22	0.21	0.21	0.21	0.20	0.19	0.17	0.16	0.16	-12%	-0.77%
Passenger cars per 1000 inhabitants	385	418	456	461	467	465	468	..	474	..	..	1.31%

CO2 Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
IEA CO ₂ from fuel combustion (Mt)*	123.67	130.12	139.99	139.06	137.28	145.79	145.19	140.77	139.53	138.49	12%	0.67%
... of which transport CO ₂ (Mt)*	35.79	37.57	45.71	45.06	50.4	52.23	55.18	53.97	55.11	57.56	61%	2.83%
<i>Transport* as a percentage of total</i>	28.9%	28.9%	32.7%	32.4%	36.7%	35.8%	38.0%	38.3%	39.5%	41.6%		
Road (Mt)	19.26	21.22	23.25	24.12	24.16	24.71	25.76	24.89	24.36	24.27	26%	1.37%
Rail (Mt)	0.22	0.24	0.18	0.17	0.1	0.13	0.12	0.13	0.13	0.11	-50%	-4.00%
Domestic Aviation (Mt)	0.02	0.2	0.14	0.11	0.05	0.22	0.22	0.01	0.01	0.01	-50%	-4.00%
International Aviation (Mt)	2.82	2.61	4.37	3.31	3.66	4.36	4.01	3.8	3.49	3	6%	0.36%
Domestic Navigation (Mt)	0.4	0.8	0.67	0.59	0.66	0.81	0.36	0.68	0.65	0.6	50%	2.41%
International Shipping (Mt)	12.97	12.36	17.03	16.66	21.74	21.93	24.65	24.4	26.4	29.54	128%	4.96%
Other Transport (Mt)	0.11	0.15	0.06	0.1	0.04	0.07	0.06	0.07	0.08	0.03	-73%	-7.36%

GHG Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
UNFCCC GHG emissions (Mt CO ₂ eq.)*	160.38	166.00	166.68	166.17	170.30	173.82	174.95	171.78	169.07	167.18	4%	0.24%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	128.73	131.90	137.26	137.91	142.02	146.64	147.24	144.55	142.81	142.04	10%	0.58%
... of which transport GHG (Mt CO ₂ eq.)*	37.70	39.21	46.52	46.86	53.29	54.51	56.79	56.46	58.52	61.81	64%	2.95%
Road (Mt)	19.72	21.85	24.10	24.76	25.09	25.63	26.63	25.77	25.29	25.17	28%	1.44%
International Aviation (Mt)	3.10	2.88	4.66	4.21	3.51	3.82	3.72	3.54	3.69	3.79	23%	1.20%
International Shipping (Mt)	14.03	13.66	16.93	17.09	23.88	24.22	25.57	26.32	28.77	32.08	129%	4.99%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

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Bosnia and Herzegovina

EU-27

N. America

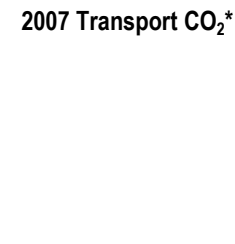
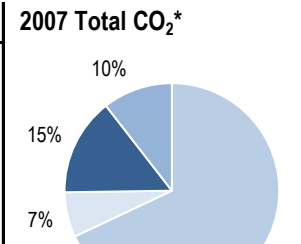
Asia-Pacific

ITF-other

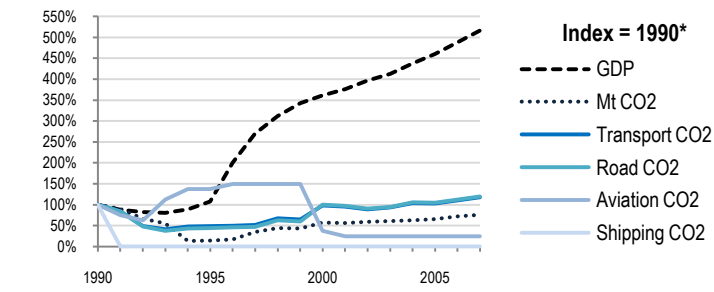
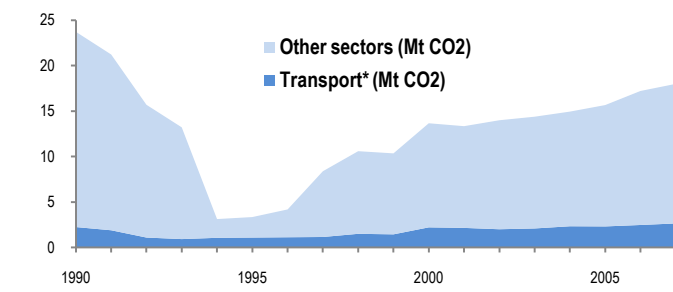
Top 10 non-ITF

17.9 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-24%	17.99	-13%	4.77	-85%	0.61
Transport CO ₂	18%	2.65	35%	0.70	-77%	0.09
Road CO ₂	20%	2.6	37%	0.69	-77%	0.09
Aviation CO ₂	-75%	0.02	-71%	0.01	-95%	0.00
Shipping CO ₂	..	0	..	0.00	..	0.00



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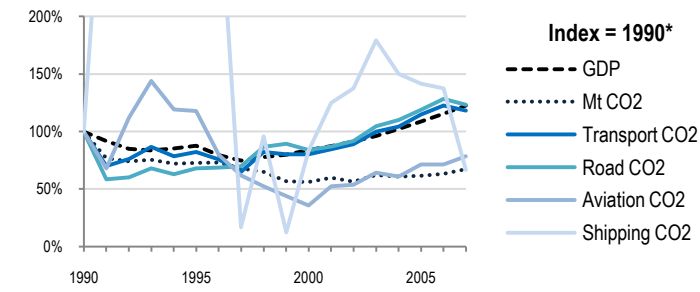
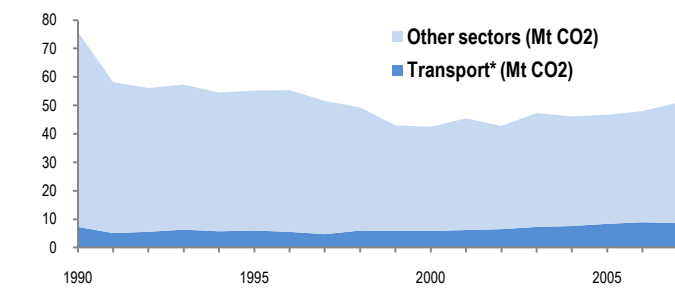
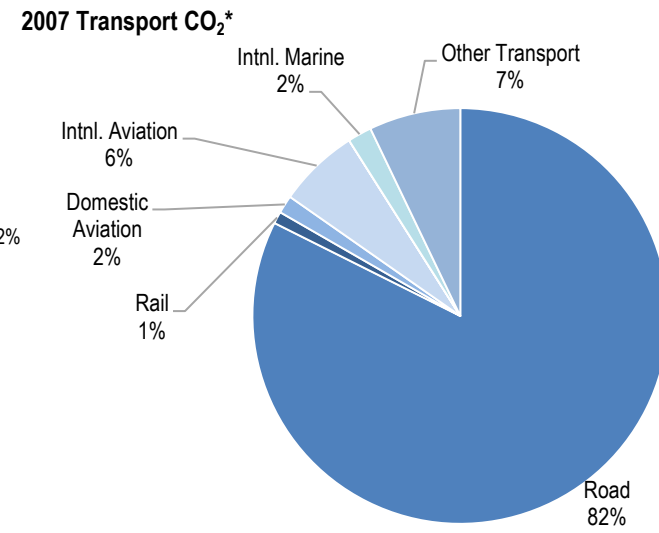
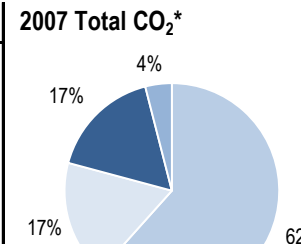
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	4.31	3.33	3.69	3.71	3.73	3.75	3.76	3.78	3.78	3.77	-13%	-0.78%
GDP PPP (billion 2000 US dollars)	5.69	6.14	20.54	21.43	22.57	23.47	24.93	26.19	27.76	29.34	416%	10.13%
Road passenger km (million pkm)	2737	112	1198	1207	1184	1212	1186	1204	1292	1292	-53%	-4.32%
Road and Rail freight tkm (million tkm)	7075	71	458	612	663	702	765	819	873	899	-87%	-11.43%
Road pkm/capita	635.03	33.63	324.66	325.34	317.43	323.20	315.43	318.52	341.80	342.71	-46%	-3.56%
Road and Rail freight tkm/\$ of GDP	1.24	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-98%	-19.57%
Passenger cars per 1000 inhabitants	101	18	..	..	..	..	..	..	..	..	..	..
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	23.71	3.35	13.66	13.34	13.99	14.38	14.94	15.66	17.21	17.99	-24%	-1.61%
... of which transport CO ₂ (Mt)*	2.25	1.1	2.22	2.16	2.01	2.1	2.34	2.32	2.48	2.65	18%	0.97%
Transport* as a percentage of total	9.5%	32.8%	16.3%	16.2%	14.4%	14.6%	15.7%	14.8%	14.4%	14.7%		
Road (Mt)	2.17	0.97	2.17	2.11	1.97	2.05	2.3	2.28	2.43	2.6	20%	1.07%
Rail (Mt)	0	0.01	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.03	..	9.59%
Domestic Aviation (Mt)	0	0.11	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	..	-13.24%
International Aviation (Mt)	0.08	0	0	0	0	0	0	0	0	0	..	..
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Bulgaria

EU-27 50.9 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-33%	50.94	-23%	6.67	-45%	0.71
Transport CO ₂	18%	8.58	35%	1.12	-4%	0.12
Road CO ₂	23%	7.06	41%	0.92	0%	0.10
Aviation CO ₂	-21%	0.66	-10%	0.09	-36%	0.01
Shipping CO ₂	-33%	0.16	-24%	0.02	-46%	0.00



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	8.72	8.40	8.06	7.91	7.87	7.82	7.78	7.74	7.69	7.64	-12%	-0.77%
GDP PPP (billion 2000 US dollars)	58.20	50.98	48.90	50.90	53.19	55.85	59.54	63.23	67.21	71.38	23%	1.21%
Road passenger km (million pkm)	30430	11508	13879	14510	15966	12954	11093	11355	11136	11272	-63%	-5.67%
Road and Rail freight tkm (million tkm)	27902	27157	8598	8214	8558	9860	9823	10208	11202	11131	-60%	-5.26%
Road pkm/capita	3489.68	1370.00	1721.96	1834.39	2028.72	1656.52	1425.84	1467.05	1448.11	1475.39	-58%	-4.94%
Road and Rail freight tkm/\$ of GDP	0.48	0.53	0.18	0.16	0.16	0.18	0.16	0.16	0.17	0.16	-67%	-6.39%
Passenger cars per 1000 inhabitants	146	196	237	264	286	295	314	..	..	..	..	5.62%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	75.83	55.23	42.47	45.46	42.78	47.29	46.12	46.7	48	50.94	-33%	-2.31%
... of which transport CO ₂ (Mt)*	7.27	5.98	5.82	6.16	6.47	7.25	7.57	8.34	8.9	8.58	18%	0.98%
Transport* as a percentage of total	9.6%	10.8%	13.7%	13.6%	15.1%	15.3%	16.4%	17.9%	18.5%	16.8%		
Road (Mt)	5.73	3.89	4.81	4.98	5.26	5.99	6.3	6.8	7.35	7.06	23%	1.24%
Rail (Mt)	0.32	0.23	0.12	0.1	0.1	0.09	0.09	0.09	0.09	0.08	-75%	-7.83%
Domestic Aviation (Mt)	0.13	0.01	0.06	0.13	0.08	0.07	0.06	0.04	0.07	0.12	-8%	-0.47%
International Aviation (Mt)	0.71	0.98	0.24	0.31	0.37	0.47	0.45	0.56	0.53	0.54	-24%	-1.60%
Domestic Navigation (Mt)	0.06	0.01	0	0	0	0	0	0	0	0	-100%	-99.98%
International Shipping (Mt)	0.18	0.85	0.2	0.3	0.33	0.43	0.36	0.34	0.33	0.16	-11%	-0.69%
Other Transport (Mt)	0.13	0	0.39	0.33	0.33	0.21	0.32	0.51	0.53	0.61	369%	9.52%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	119.45	90.00	69.70	70.25	67.25	72.67	71.87	71.85	72.76	76.49	-36%	-2.59%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	81.03	61.31	46.86	48.72	46.34	50.68	49.64	50.32	51.31	54.70	-32%	-2.29%
... of which transport GHG (Mt CO ₂ eq.)*	12.78	8.37	6.44	6.80	7.14	8.12	8.27	9.03	9.55	8.99	-30%	-2.05%
Road (Mt)	7.69	5.46	5.08	5.26	5.56	6.36	6.64	7.26	7.71	7.38	-4%	-0.24%
International Aviation (Mt)	0.89	0.55	0.27	0.39	0.40	0.49	0.41	0.47	0.48	0.53	-41%	-3.04%
International Shipping (Mt)	0.88	0.89	0.21	0.31	0.34	0.44	0.37	0.35	0.34	0.17	-81%	-9.31%

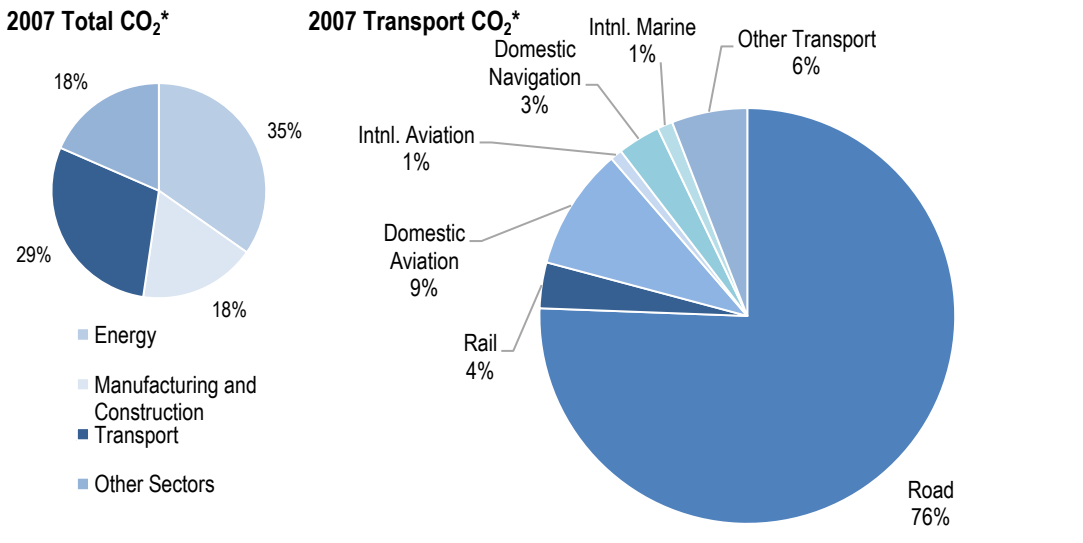
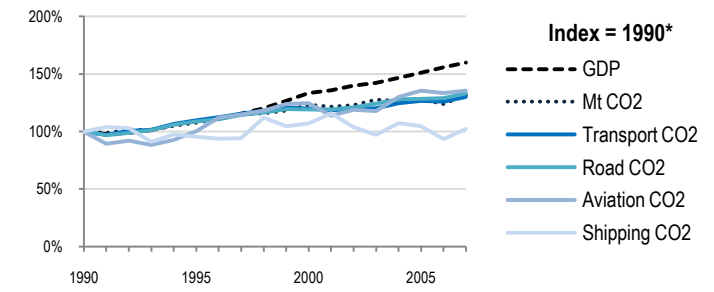
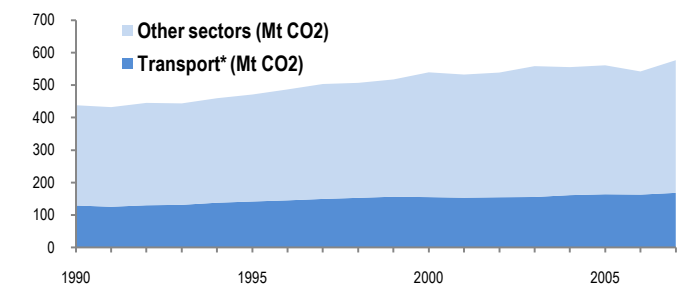
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Canada

EU-27 **N. America** Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007	2007 Total CO ₂ *
Total CO ₂	32%	576.51	11%	17.48	-18%	0.55	
Transport CO ₂	30%	168.34	9%	5.10	-19%	0.16	
Road CO ₂	33%	127.25	12%	3.86	-17%	0.12	
Aviation CO ₂	35%	17.56	14%	0.53	-15%	0.02	
Shipping CO ₂	2%	7.62	-14%	0.23	-36%	0.01	



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	27.70	29.30	30.69	31.02	31.37	31.68	32.00	32.31	32.65	32.98	19%	1.03%
GDP PPP (billion 2000 US dollars)	654.70	713.00	873.01	888.58	914.57	931.77	960.84	988.47	1019.21	1046.87	60%	2.80%
Road passenger km (million pkm)	0	497000	502000	481000	493000	485000	488368	512736	510103	503471	..	0.11%
Road and Rail freight tkm (million tkm)	0	291800	351900	353400	348000	358700	420900	437800	440000	444100	..	3.56%
Road pkm/capita	0.00	16962.46	16357.12	15506.13	15715.65	15309.34	15261.50	15869.27	15623.37	15265.95	..	-0.87%
Road and Rail freight tkm/\$ of GDP	0.00	0.41	0.40	0.40	0.38	0.38	0.44	0.44	0.43	0.42	..	0.30%
Passenger cars per 1000 inhabitants	468	449	547	549	559	561	..	..	..	..	..	1.40%

CO2 Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
IEA CO ₂ from fuel combustion (Mt)*	437.93	470.98	539.2	532.41	538.48	558.24	555.2	560.79	541.94	576.51	32%	1.63%
... of which transport CO ₂ (Mt)*	129.42	141.73	155.22	153.47	154.79	155.64	161.29	164.01	163.02	168.34	30%	1.56%
Transport* as a percentage of total	29.6%	30.1%	28.8%	28.8%	28.7%	27.9%	29.1%	29.2%	30.1%	29.2%		
Road (Mt)	95.65	104	113.94	114.02	115.45	118.69	122.52	122.89	123.34	127.25	33%	1.69%
Rail (Mt)	6.21	5.62	5.77	5.67	5.14	5.13	5.21	5.48	5.65	6	-3%	-0.20%
Domestic Aviation (Mt)	10.25	10.39	13.08	11.54	12.63	13.12	14.15	15	14.78	16.01	56%	2.66%
International Aviation (Mt)	2.71	2.58	3.08	3.22	2.78	2.14	2.71	2.55	2.53	1.55	-43%	-3.23%
Domestic Navigation (Mt)	4.58	3.95	4.64	5.03	5	5.66	6.08	5.9	5.26	5.6	22%	1.19%
International Shipping (Mt)	2.87	3.17	3.34	3.59	2.73	1.57	1.91	1.88	1.7	2.02	-30%	-2.04%
Other Transport (Mt)	7.14	12.02	11.36	10.41	11.05	9.33	8.72	10.31	9.77	9.91	39%	1.95%

GHG Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
UNFCCC GHG emissions (Mt CO ₂ eq.)*	601.98	651.98	730.84	724.04	728.94	750.82	752.41	743.14	730.13	758.94	26%	1.37%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	437.00	463.80	535.98	531.10	536.88	553.54	548.86	540.57	526.96	561.31	28%	1.48%
... of which transport GHG (Mt CO ₂ eq.)*	155.53	170.32	191.94	189.19	190.34	193.06	199.91	204.45	203.38	211.74	36%	1.83%
Road (Mt)	98.43	108.78	118.83	121.11	122.79	125.36	129.49	130.97	132.58	136.69	39%	1.95%
International Aviation (Mt)	7.08	7.55	10.17	9.12	9.18	8.51	9.54	10.17	10.14	9.75	38%	1.90%
International Shipping (Mt)	3.11	3.43	3.56	3.83	2.92	1.68	2.04	2.00	1.81	2.15	-31%	-2.16%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

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Croatia

EU-27

N. America

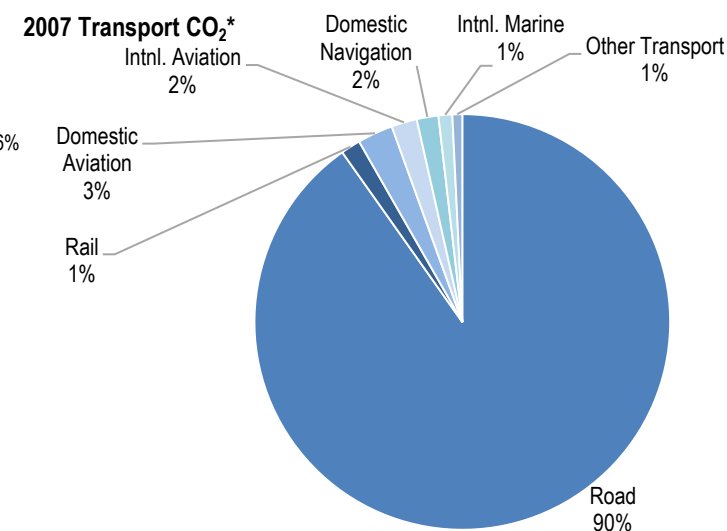
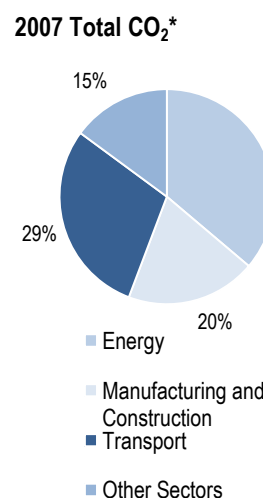
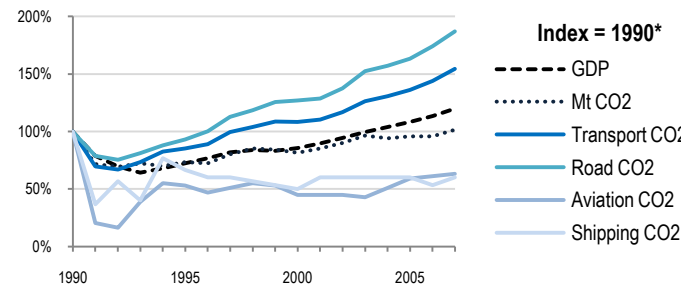
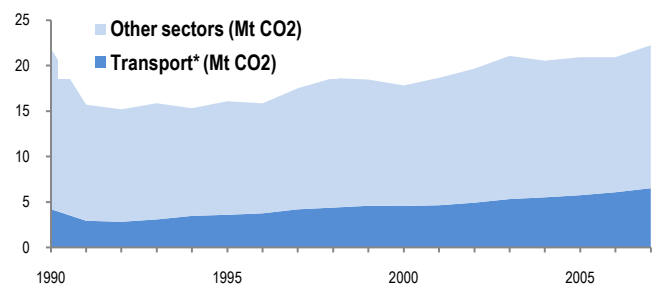
Asia-Pacific

ITF-other

Top 10 non-ITF

22.2 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007	2007 Total CO ₂ *
Total CO ₂	2%	22.23	9%	5.01	-15%	0.39	22.23
Transport CO ₂	55%	6.52	66%	1.47	29%	0.11	6.52
Road CO ₂	87%	5.89	101%	1.33	56%	0.10	5.89
Aviation CO ₂	-37%	0.31	-32%	0.07	-47%	0.01	0.31
Shipping CO ₂	-40%	0.18	-35%	0.04	-50%	0.00	0.18



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	4.78	4.67	4.50	4.44	4.44	4.44	4.44	4.44	4.44	4.44	-7%	-0.43%
GDP PPP (billion 2000 US dollars)	47.82	34.67	40.99	42.81	45.20	47.62	49.64	51.78	54.24	57.25	20%	1.06%
Road passenger km (million pkm)	7004	4052	3331	3478	3557	3716	3390	3403	3537	3808	-46%	-3.52%
Road and Rail freight tkm (million tkm)	9387	3225	4604	8857	9619	10728	11312	12163	13480	14076	50%	2.41%
Road pkm/capita	1465.27	867.67	740.22	783.33	801.13	836.94	763.51	766.44	796.62	857.66	-41%	-3.10%
Road and Rail freight tkm/\$ of GDP	0.20	0.09	0.11	0.21	0.21	0.23	0.23	0.23	0.25	0.25	25%	1.33%
Passenger cars per 1000 inhabitants	..	..	..	..	..	..	..	..	..	..	..	..
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	21.87	16.08	17.82	18.65	19.66	21.06	20.54	20.92	20.92	22.23	2%	0.10%
... of which transport CO ₂ (Mt)*	4.22	3.6	4.57	4.65	4.93	5.33	5.52	5.75	6.08	6.52	55%	2.59%
Transport* as a percentage of total	19.3%	22.4%	25.6%	24.9%	25.1%	25.3%	26.9%	27.5%	29.1%	29.3%		
Road (Mt)	3.15	2.93	4	4.05	4.33	4.8	4.95	5.14	5.48	5.89	87%	3.75%
Rail (Mt)	0.13	0.1	0.08	0.09	0.09	0.09	0.09	0.1	0.1	0.1	-23%	-1.53%
Domestic Aviation (Mt)	0.34	0.09	0.12	0.16	0.16	0.14	0.16	0.17	0.18	0.18	-47%	-3.67%
International Aviation (Mt)	0.15	0.17	0.1	0.06	0.06	0.07	0.09	0.12	0.12	0.13	-13%	-0.84%
Domestic Navigation (Mt)	0.15	0.1	0.09	0.09	0.11	0.11	0.11	0.1	0.1	0.11	-27%	-1.81%
International Shipping (Mt)	0.15	0.1	0.06	0.09	0.07	0.07	0.07	0.08	0.06	0.07	-53%	-4.38%
Other Transport (Mt)	0.14	0.11	0.12	0.11	0.12	0.05	0.05	0.04	0.04	0.05	-64%	-5.88%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	31.83	23.16	26.18	27.42	28.37	30.16	30.09	30.74	31.06	32.71	3%	0.16%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	20.94	14.81	17.31	18.16	19.23	20.71	20.15	20.57	20.57	21.84	4%	0.25%
... of which transport GHG (Mt CO ₂ eq.)*	4.53	3.75	4.80	4.90	5.20	5.59	5.77	6.04	6.41	6.89	52%	2.51%
Road (Mt)	3.64	3.17	4.35	4.41	4.71	5.11	5.27	5.47	5.84	6.28	73%	3.26%
International Aviation (Mt)	0.35	0.19	0.17	0.17	0.16	0.16	0.19	0.23	0.23	0.25	-29%	-1.99%
International Shipping (Mt)	0.11	0.10	0.06	0.09	0.07	0.07	0.07	0.08	0.06	0.08	-30%	-2.10%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Czech Republic

EU-27

N. America

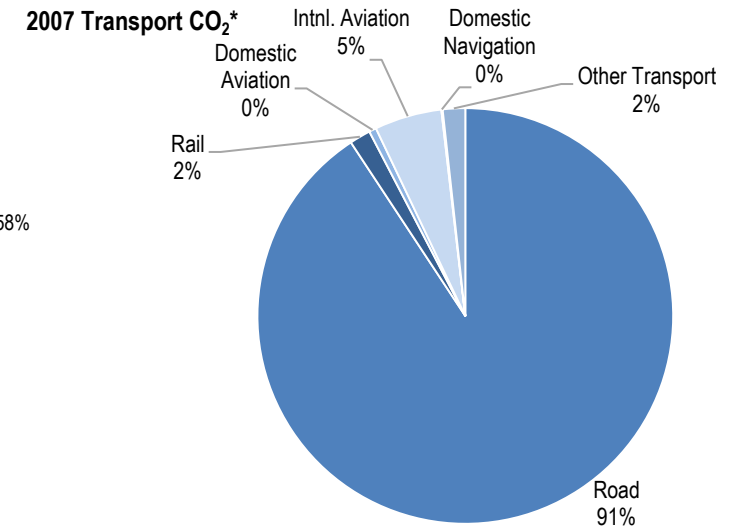
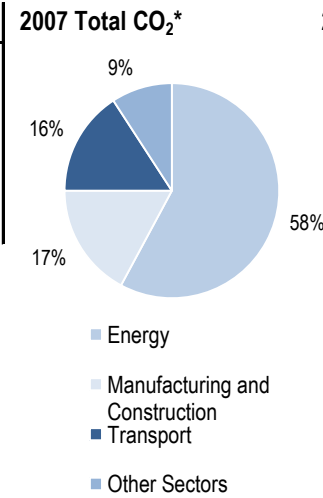
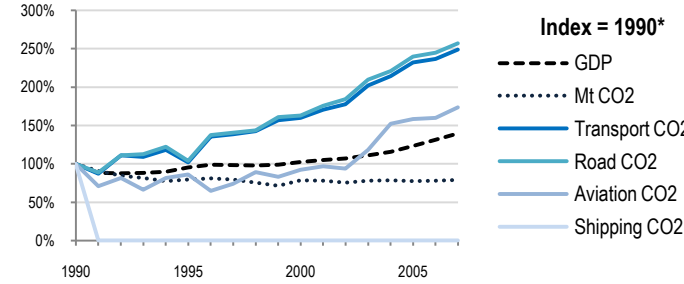
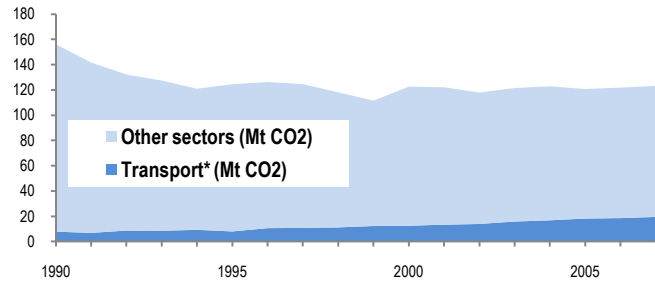
Asia-Pacific

ITF-other

Top 10 non-ITF

123.2 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-21%	123.16	-21%	11.93	-43%	0.59
Transport CO ₂	149%	19.5	150%	1.89	79%	0.09
Road CO ₂	157%	17.7	158%	1.72	85%	0.08
Aviation CO ₂	74%	1.13	75%	0.11	25%	0.01
Shipping CO ₂	..	0.02	..	0.00	..	0.00



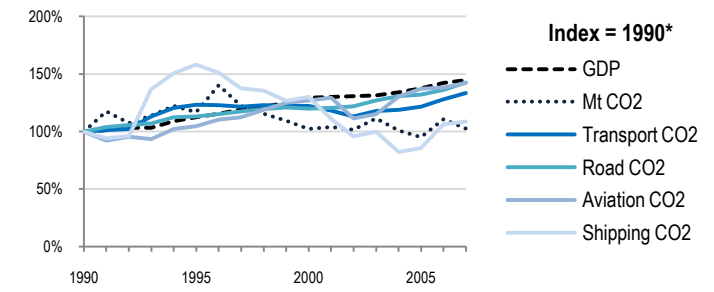
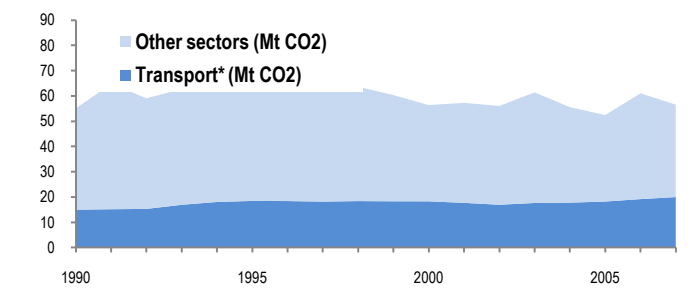
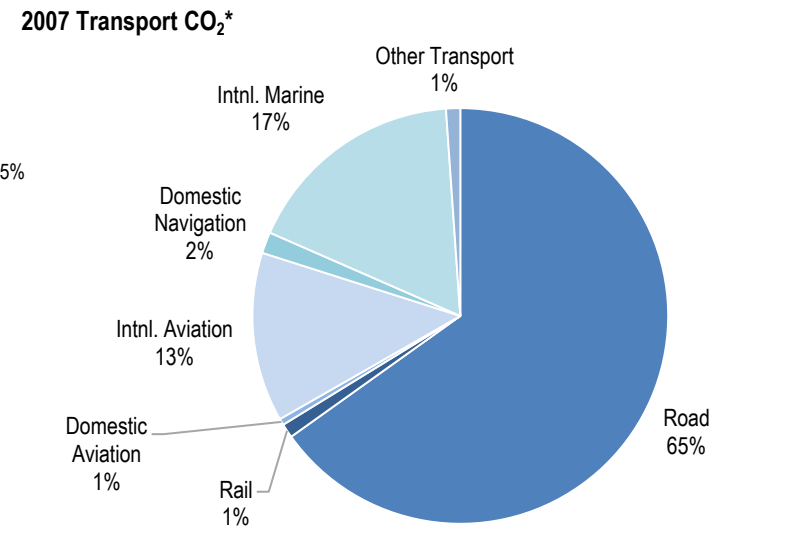
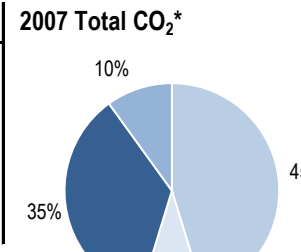
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	10.36	10.33	10.27	10.22	10.20	10.20	10.21	10.23	10.27	10.32	0%	-0.02%
GDP PPP (billion 2000 US dollars)	149.98	142.91	153.83	157.61	160.60	166.38	173.85	184.83	197.37	209.12	39%	1.97%
Road passenger km (million pkm)	0	65473	73291	74078	74958	76809	76086	77248	79131	81059	..	1.80%
Road and Rail freight tkm (million tkm)	0	56726	56532	54142	60869	62426	61102	58313	66148	64445	..	1.07%
Road pkm/capita	0.00	6338.14	7136.42	7248.34	7348.82	7530.29	7452.11	7551.12	7705.06	7854.55	..	1.80%
Road and Rail freight tkm/\$ of GDP	0.00	0.40	0.37	0.34	0.38	0.38	0.35	0.32	0.34	0.31	..	-2.09%
Passenger cars per 1000 inhabitants	228	301	335	345	358	363	..	..	399	..	..	3.56%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	156.09	124.47	122.56	122.12	117.86	121.48	122.87	120.68	121.81	123.16	-21%	-1.38%
... of which transport CO ₂ (Mt)*	7.83	8	12.54	13.34	13.9	15.82	16.8	18.19	18.54	19.5	149%	5.51%
Transport* as a percentage of total	5.0%	6.4%	10.2%	10.9%	11.8%	13.0%	13.7%	15.1%	15.2%	15.8%		
Road (Mt)	6.88	7.14	11.23	12.08	12.68	14.43	15.19	16.51	16.83	17.7	157%	5.72%
Rail (Mt)	0	0	0.32	0.3	0.32	0.32	0.3	0.32	0.33	0.32	..	0.00%
Domestic Aviation (Mt)	0	0	0.12	0.15	0.11	0.17	0.13	0.09	0.05	0.11	..	-1.24%
International Aviation (Mt)	0.65	0.56	0.48	0.48	0.5	0.6	0.86	0.94	0.99	1.02	57%	2.69%
Domestic Navigation (Mt)	0	0	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02	..	0.00%
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0.3	0.3	0.37	0.3	0.28	0.28	0.3	0.31	0.32	0.34	13%	0.74%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	195.36	153.68	147.83	149.99	145.77	146.77	148.10	147.33	150.22	151.97	-22%	-1.47%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	148.39	119.52	116.31	118.93	115.32	116.00	115.97	116.66	117.85	119.21	-20%	-1.28%
... of which transport GHG (Mt CO ₂ eq.)*	8.10	10.22	13.19	14.10	14.76	16.74	17.74	19.13	19.50	20.37	151%	5.57%
Road (Mt)	6.09	8.94	11.93	12.83	13.49	15.41	16.19	17.58	17.88	18.79	209%	6.85%
International Aviation (Mt)	0.65	0.48	0.60	0.64	0.69	0.81	1.04	1.08	1.11	1.14	76%	3.40%
International Shipping (Mt)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Denmark

EU-27 | N. America | Asia-Pacific | ITF-other | Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	3%	56.55	-3%	10.36	-29%	0.33
Transport CO ₂	33%	19.97	26%	3.66	-8%	0.12
Road CO ₂	43%	13	34%	2.38	-1%	0.08
Aviation CO ₂	42%	2.73	34%	0.50	-2%	0.02
Shipping CO ₂	9%	3.79	2%	0.69	-25%	0.02



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	5.14	5.23	5.34	5.36	5.38	5.39	5.40	5.42	5.44	5.46	6%	0.36%
GDP PPP (billion 2000 US dollars)	118.93	133.50	153.68	154.76	155.48	156.08	159.66	163.56	169.03	171.82	44%	2.19%
Road passenger km (million pkm)	59460	61672	65217	64466	64886	65784	67605	68310	69854	71377	20%	1.08%
Road and Rail freight tkm (million tkm)	11139	11311	13025	12848	12963	12997	12686	13025	13379	13576	22%	1.17%
Road pkm/capita	11568.09	11791.97	12212.92	12027.24	12060.59	12204.82	12519.44	12603.32	12840.81	13072.71	13%	0.72%
Road and Rail freight tkm/\$ of GDP	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	-16%	-1.00%
Passenger cars per 1000 inhabitants	320	319	357	358	360	..	351	354	..	..	..	0.68%

CO2 Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
IEA CO ₂ from fuel combustion (Mt)*	55.1	64.42	56.38	57.26	56.02	61.39	55.56	52.44	61.01	56.55	3%	0.15%
... of which transport CO ₂ (Mt)*	14.97	18.44	18.29	17.68	16.94	17.63	17.77	18.2	19.16	19.97	33%	1.71%
Transport* as a percentage of total	27.2%	28.6%	32.4%	30.9%	30.2%	28.7%	32.0%	34.7%	31.4%	35.3%		
Road (Mt)	9.11	10.3	10.92	10.97	11.11	11.58	11.91	12.03	12.41	13	43%	2.11%
Rail (Mt)	0.29	0.3	0.22	0.21	0.21	0.22	0.21	0.23	0.22	0.22	-24%	-1.61%
Domestic Aviation (Mt)	0.22	0.17	0.12	0.12	0.1	0.09	0.08	0.08	0.09	0.1	-55%	-4.53%
International Aviation (Mt)	1.7	1.84	2.32	2.36	2.04	2.12	2.42	2.55	2.56	2.63	55%	2.60%
Domestic Navigation (Mt)	0.47	0.56	0.36	0.35	0.43	0.42	0.38	0.42	0.37	0.33	-30%	-2.06%
International Shipping (Mt)	3.02	4.96	4.18	3.53	2.91	3.06	2.49	2.57	3.34	3.46	15%	0.80%
Other Transport (Mt)	0.16	0.3	0.16	0.15	0.14	0.14	0.28	0.31	0.17	0.22	38%	1.89%

GHG Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
UNFCCC GHG emissions (Mt CO ₂ eq.)*	75.32	84.43	75.91	76.92	75.12	80.53	74.28	70.20	78.61	74.45	-1%	-0.07%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	56.68	66.53	58.25	59.35	58.07	63.63	57.59	54.36	62.99	58.41	3%	0.18%
... of which transport GHG (Mt CO ₂ eq.)*	15.60	19.10	18.99	18.33	17.44	18.16	18.18	18.51	19.70	20.51	31%	1.62%
Road (Mt)	9.43	10.76	11.38	11.39	11.52	11.97	12.28	12.37	12.74	13.35	42%	2.07%
International Aviation (Mt)	1.76	1.89	2.38	2.41	2.08	2.17	2.48	2.60	2.61	2.73	56%	2.64%
International Shipping (Mt)	3.15	5.16	4.36	3.68	3.02	3.19	2.60	2.69	3.50	3.63	15%	0.84%

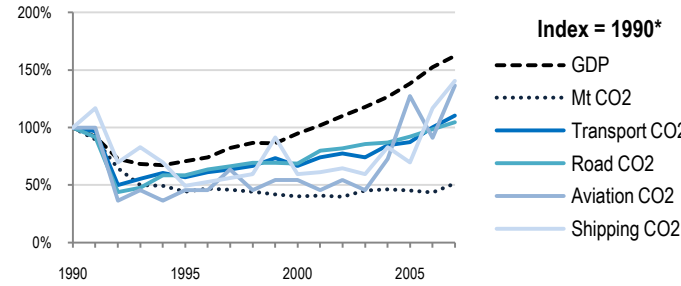
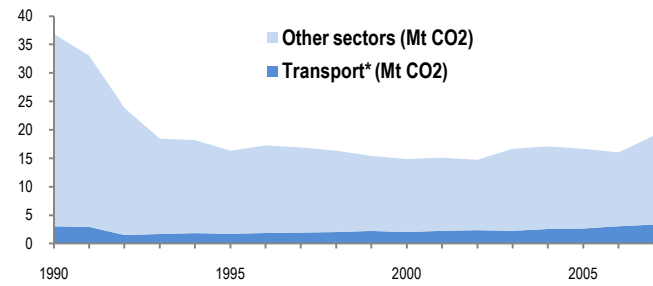
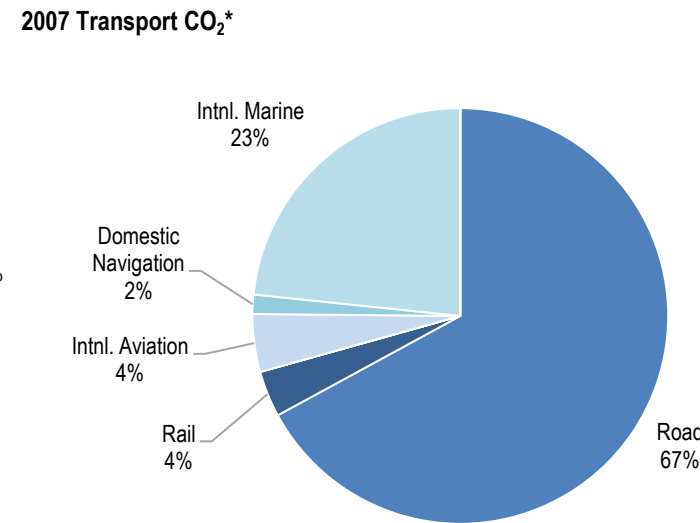
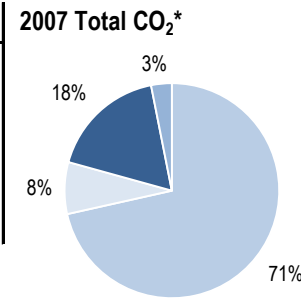
* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

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Estonia

EU-27 19.0 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-49%	18.98	-40%	14.16	-68%	0.86
Transport CO ₂	10%	3.34	29%	2.49	-32%	0.15
Road CO ₂	5%	2.24	23%	1.67	-35%	0.10
Aviation CO ₂	36%	0.15	60%	0.11	-16%	0.01
Shipping CO ₂	41%	0.83	65%	0.62	-13%	0.04



Transport and the Economy

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	1.57	1.44	1.37	1.36	1.36	1.35	1.35	1.35	1.34	1.34	-15%	-0.93%
GDP PPP (billion 2000 US dollars)	13.59	9.59	12.86	13.85	14.93	15.99	17.20	18.77	20.72	22.03	62%	2.88%
Road passenger km (million pkm)	4454	2048	2630	2461	2330	2297	2469	2716	2881	2677	-40%	-2.95%
Road and Rail freight tkm (million tkm)	11487	5395	12117	13234	14084	16098	17325	18280	19275	19090	66%	3.03%
Road pkm/capita	2836.94	1422.22	1919.71	1809.56	1713.24	1701.48	1828.89	2011.85	2150.00	1997.76	-30%	-2.04%
Road and Rail freight tkm/\$ of GDP	0.85	0.56	0.94	0.96	0.94	1.01	1.01	0.97	0.93	0.87	3%	0.15%
Passenger cars per 1000 inhabitants	154	267	339	299	295	321	349	367	..	..	..	5.96%

CO2 Emissions

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
IEA CO ₂ from fuel combustion (Mt)*	36.87	16.33	14.86	15.1	14.72	16.66	17.08	16.66	16.03	18.98	-49%	-3.83%
... of which transport CO ₂ (Mt)*	3.03	1.72	2.02	2.24	2.35	2.24	2.56	2.65	3.04	3.34	10%	0.57%
<i>Transport* as a percentage of total</i>	8.2%	10.5%	13.6%	14.8%	16.0%	13.4%	15.0%	15.9%	19.0%	17.6%		
Road (Mt)	2.14	1.25	1.47	1.71	1.75	1.83	1.86	1.97	2.11	2.24	5%	0.27%
Rail (Mt)	0.16	0.11	0.13	0.12	0.15	0	0.12	0.12	0.14	0.12	-25%	-1.68%
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0.02	0.01	0	..	..
International Aviation (Mt)	0.11	0.05	0.06	0.05	0.06	0.05	0.08	0.12	0.09	0.15	36%	1.84%
Domestic Navigation (Mt)	0.02	0.01	0.02	0.04	0.01	0	0.02	0.03	0.02	0.05	150%	5.54%
International Shipping (Mt)	0.57	0.28	0.33	0.32	0.37	0.35	0.47	0.38	0.67	0.78	37%	1.86%
Other Transport (Mt)	0.02	0.01	0	0	0	0	0	0	0	0	-100%	..

GHG Emissions

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
UNFCCC GHG emissions (Mt CO ₂ eq.)*	42.62	21.19	18.77	18.96	18.50	20.28	20.90	20.16	19.95	22.95	-46%	-3.58%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	37.18	18.11	15.53	15.80	15.63	17.32	17.64	17.02	16.73	19.50	-48%	-3.73%
... of which transport GHG (Mt CO ₂ eq.)*	4.07	1.97	2.07	2.35	2.56	2.56	2.77	2.80	3.25	3.55	-13%	-0.81%
Road (Mt)	2.19	1.42	1.48	1.81	1.84	1.83	1.91	2.00	2.18	2.30	5%	0.31%
International Aviation (Mt)	0.11	0.05	0.06	0.05	0.05	0.06	0.09	0.14	0.10	0.15	41%	2.03%
International Shipping (Mt)	0.58	0.28	0.33	0.32	0.37	0.36	0.47	0.38	0.67	0.78	35%	1.79%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Finland

EU-27
67.5 Mt

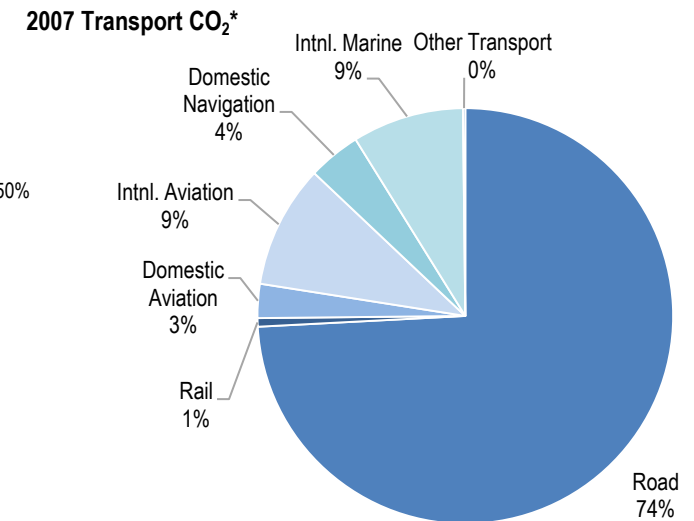
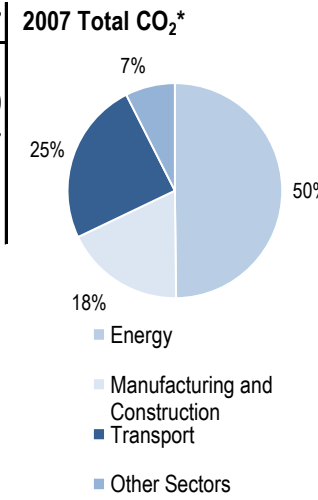
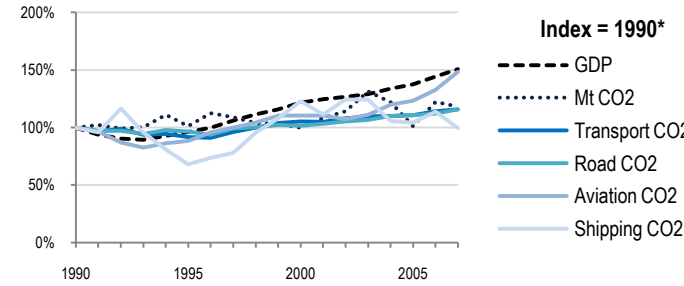
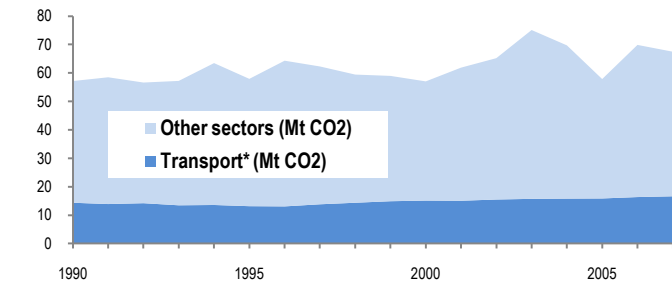
N. America

Asia-Pacific

ITF-other

Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	18%	67.47	11%	12.75	-22%	0.41
Transport CO ₂	16%	16.62	9%	3.14	-23%	0.10
Road CO ₂	16%	12.32	9%	2.33	-23%	0.07
Aviation CO ₂	48%	2.03	40%	0.38	-2%	0.01
Shipping CO ₂	0%	2.12	-6%	0.40	-34%	0.01



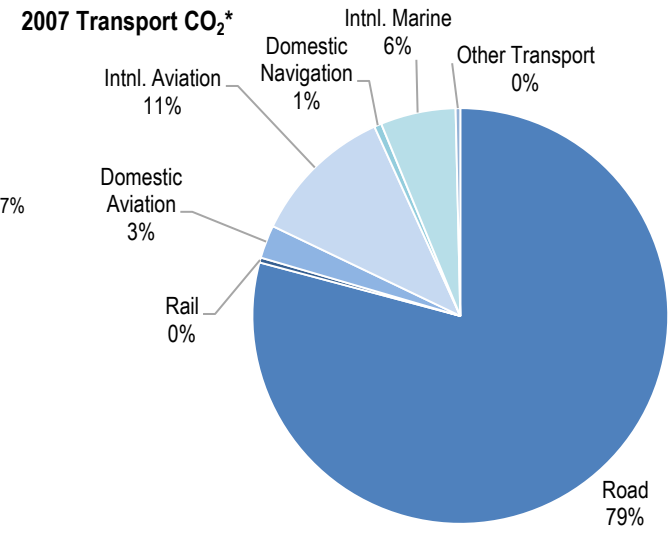
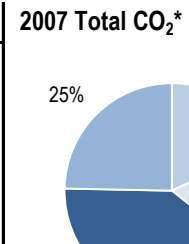
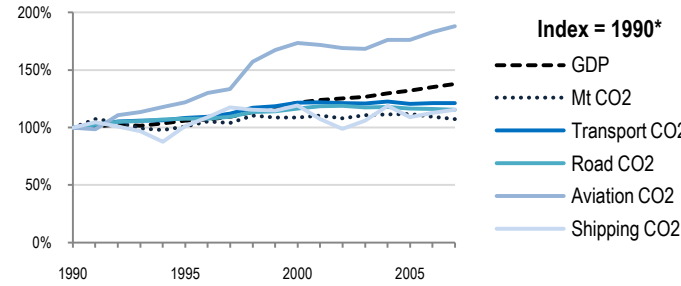
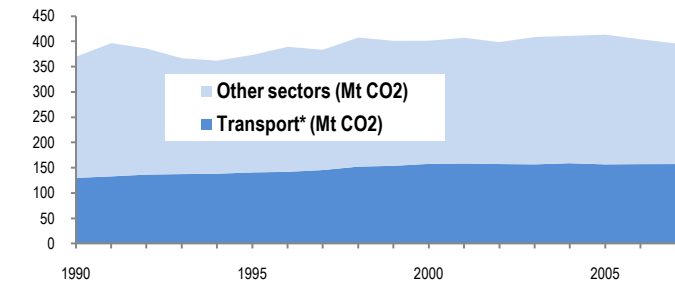
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	4.99	5.11	5.18	5.19	5.20	5.21	5.23	5.25	5.27	5.29	6%	0.34%
GDP PPP (billion 2000 US dollars)	109.27	105.18	132.78	136.28	138.52	140.98	146.23	150.38	157.68	164.81	51%	2.45%
Road passenger km (million pkm)	59700	58000	63400	64700	66000	67260	68545	69450	69995	71325	19%	1.05%
Road and Rail freight tkm (million tkm)	33757	31631	37823	36534	37733	36942	37435	37519	36550	36397	8%	0.44%
Road pkm/capita	11963.93	11350.29	12239.38	12466.28	12692.31	12909.79	13106.12	13228.57	13281.78	13482.99	13%	0.71%
Road and Rail freight tkm/\$ of GDP	0.31	0.30	0.28	0.27	0.27	0.26	0.26	0.25	0.23	0.22	-29%	-1.96%
Passenger cars per 1000 inhabitants	386	372	410	414	419	433	446	460	470	..	..	1.24%
CO₂ Emissions												
IEA CO ₂ from fuel combustion (Mt)*	57.15	57.92	57.03	61.87	65.2	75.1	69.7	57.86	69.86	67.47	18%	0.98%
... of which transport CO ₂ (Mt)*	14.35	13.14	15.11	15.05	15.49	15.72	15.8	15.86	16.35	16.62	16%	0.87%
Transport* as a percentage of total	25.1%	22.7%	26.5%	24.3%	23.8%	20.9%	22.7%	27.4%	23.4%	24.6%		
Road (Mt)	10.65	10.26	10.8	10.99	11.2	11.36	11.73	11.78	11.93	12.32	16%	0.86%
Rail (Mt)	0.19	0.19	0.15	0.14	0.13	0.13	0.13	0.13	0.13	0.11	-42%	-3.16%
Domestic Aviation (Mt)	0.4	0.35	0.49	0.46	0.44	0.45	0.41	0.45	0.44	0.44	10%	0.56%
International Aviation (Mt)	0.97	0.86	1.02	1.05	1.03	1.07	1.23	1.24	1.38	1.59	64%	2.95%
Domestic Navigation (Mt)	0.35	0.41	0.52	0.57	0.63	0.64	0.63	0.63	0.67	0.68	94%	3.98%
International Shipping (Mt)	1.78	1.04	2.1	1.8	2.02	2.01	1.62	1.59	1.75	1.44	-19%	-1.24%
Other Transport (Mt)	0	0.03	0.03	0.05	0.04	0.06	0.05	0.04	0.04	0.03	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	73.75	73.21	72.73	77.73	80.04	87.76	83.48	71.68	83.23	81.53	11%	0.59%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	57.23	57.99	57.63	62.73	65.57	73.05	68.74	57.12	68.76	66.61	16%	0.90%
... of which transport GHG (Mt CO ₂ eq.)*	15.68	14.12	16.27	16.23	16.68	16.92	17.07	17.12	17.64	17.93	14%	0.79%
Road (Mt)	11.09	10.52	11.28	11.50	11.75	11.96	12.35	12.42	12.59	13.00	17%	0.94%
International Aviation (Mt)	1.03	0.91	1.08	1.11	1.10	1.13	1.30	1.31	1.46	1.68	64%	2.96%
International Shipping (Mt)	1.86	1.08	2.10	1.88	2.12	2.11	1.69	1.67	1.83	1.50	-19%	-1.25%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

France

EU-27 396.0 Mt	N. America	Asia-Pacific	ITF-other	Top 10 non-ITF
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Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	7%	395.98	-2%	6.23	-22%	0.23
Transport CO ₂	21%	157.23	11%	2.47	-12%	0.09
Road CO ₂	16%	124.45	6%	1.96	-16%	0.07
Aviation CO ₂	88%	21.53	72%	0.34	36%	0.01
Shipping CO ₂	15%	10.09	6%	0.16	-16%	0.01



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	58.17	59.42	60.75	61.18	61.62	62.04	62.45	62.82	63.20	63.57	9%	0.52%
GDP PPP (billion 2000 US dollars)	1260.31	1334.72	1532.89	1561.31	1577.34	1594.49	1633.88	1664.86	1701.00	1737.96	38%	1.91%
Road passenger km (million pkm)	627300	681700	742600	768900	775700	781300	780900	771300	768700	774900	24%	1.25%
Road and Rail freight tkm (million tkm)	164470	203644	239572	239367	238573	235984	242447	232812	239613	247527	50%	2.43%
Road pkm/capita	10783.91	11472.57	12223.87	12567.83	12588.45	12593.49	12504.40	12277.94	12162.97	12189.71	13%	0.72%
Road and Rail freight tkm/\$ of GDP	0.13	0.15	0.16	0.15	0.15	0.15	0.15	0.14	0.14	0.14	9%	0.52%
Passenger cars per 1000 inhabitants	405	434	476	485	489	492	494	494	496	..	..	1.27%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	369.39	373.07	401.24	407.06	398.5	408.52	410.86	413.22	404.1	395.98	7%	0.41%
... of which transport CO ₂ (Mt)*	129.79	140.73	157.61	158.21	157.3	156.64	158.89	156.61	157.1	157.23	21%	1.13%
Transport* as a percentage of total	35.1%	37.7%	39.3%	38.9%	39.5%	38.3%	38.7%	37.9%	38.9%	39.7%		
Road (Mt)	107.73	116.08	125.55	127.71	127.85	126.7	126.98	125.58	125.06	124.45	16%	0.85%
Rail (Mt)	1.2	1.19	1.14	0.75	0.77	0.73	0.73	0.66	0.64	0.6	-50%	-4.00%
Domestic Aviation (Mt)	2.14	2.53	4.81	4.77	4.39	4.41	4.26	4.1	4.11	4.06	90%	3.84%
International Aviation (Mt)	9.32	11.44	15.07	14.91	14.97	14.88	15.91	16.1	16.86	17.47	87%	3.77%
Domestic Navigation (Mt)	0.78	0.89	1	0.91	0.9	0.9	0.9	0.89	0.88	0.89	14%	0.78%
International Shipping (Mt)	7.96	7.94	9.42	8.46	7.73	8.37	9.48	8.65	8.97	9.2	16%	0.86%
Other Transport (Mt)	0.67	0.66	0.62	0.7	0.69	0.64	0.63	0.63	0.58	0.57	-15%	-0.95%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	582.65	577.69	584.72	585.19	576.10	579.77	582.04	583.48	572.66	562.97	-3%	-0.20%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	392.21	393.82	414.57	419.15	411.00	417.88	423.35	425.67	417.97	409.21	4%	0.25%
... of which transport GHG (Mt CO ₂ eq.)*	136.84	147.71	162.16	163.88	164.78	165.14	167.92	165.78	165.85	165.37	21%	1.12%
Road (Mt)	112.16	121.25	128.62	131.83	132.66	132.48	132.74	131.19	130.52	129.07	15%	0.83%
International Aviation (Mt)	8.96	10.82	14.45	14.61	14.65	14.77	15.80	16.02	16.93	17.60	97%	4.06%
International Shipping (Mt)	8.20	7.27	9.70	8.26	8.01	8.68	9.87	9.02	9.36	9.60	17%	0.93%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

FYR of Macedonia

EU-27

N. America

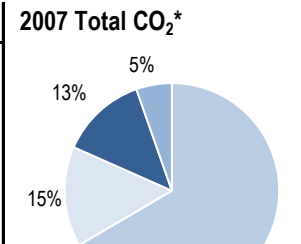
Asia-Pacific

ITF-other

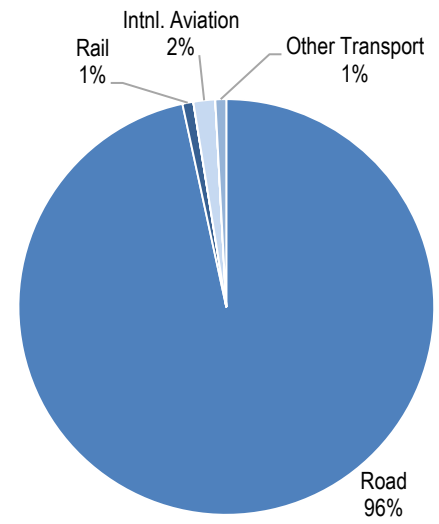
Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	7%	9.14	0%	4.48	0%	0.64
Transport CO ₂	53%	1.19	43%	0.58	43%	0.08
Road CO ₂	54%	1.14	44%	0.56	44%	0.08
Aviation CO ₂	0%	0.02	-6%	0.01	-6%	0.00
Shipping CO ₂	..	0	..	0.00	..	0.00

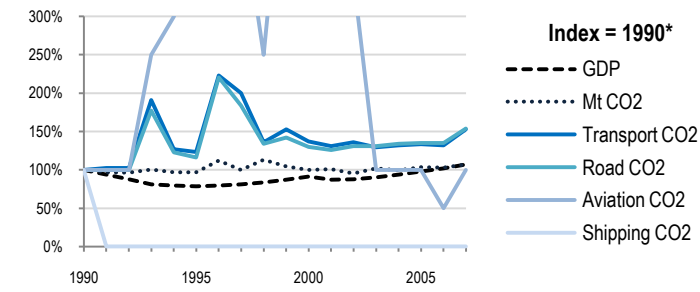
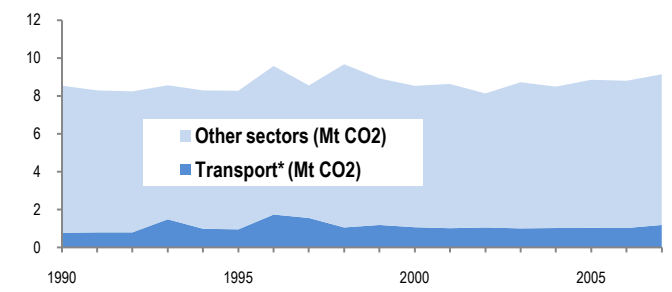
9.1 Mt



2007 Transport CO₂*



REDUCING TRANSPORT GHG EMISSIONS - Trends & Data 2010. © OECD/ITF 2010



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	1.91	1.96	2.01	2.02	2.02	2.03	2.03	2.03	2.04	2.04	7%	0.39%
GDP PPP (billion 2000 US dollars)	13.34	10.51	12.17	11.62	11.72	12.05	12.54	13.05	13.57	14.25	7%	0.39%
Road passenger km (million pkm)	1492	971	774	831	1042	1344	1110	1087	1016	1027	-31%	-2.17%
Road and Rail freight tkm (million tkm)	2958	1343	1303	3593	4013	5823	5767	6106	8913	6716	127%	4.94%
Road pkm/capita	781.15	495.41	385.07	411.39	515.84	662.07	546.80	535.47	498.04	503.43	-36%	-2.55%
Road and Rail freight tkm/\$ of GDP	0.22	0.13	0.11	0.31	0.34	0.48	0.46	0.47	0.66	0.47	113%	4.54%
Passenger cars per 1000 inhabitants	121	145	148	..	152	150	..	..	..	..	..	1.67%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	8.54	8.27	8.53	8.63	8.13	8.72	8.49	8.85	8.8	9.14	7%	0.40%
... of which transport CO ₂ (Mt)*	0.78	0.96	1.07	1.02	1.06	1.01	1.03	1.04	1.03	1.19	53%	2.52%
Transport* as a percentage of total	9.1%	11.6%	12.5%	11.8%	13.0%	11.6%	12.1%	11.8%	11.7%	13.0%		
Road (Mt)	0.74	0.86	0.96	0.93	0.97	0.97	0.99	1	1	1.14	54%	2.57%
Rail (Mt)	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-50%	-4.00%
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0.02	0.09	0.09	0.07	0.07	0.02	0.02	0.02	0.01	0.02	0%	0.00%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Georgia

EU-27

N. America

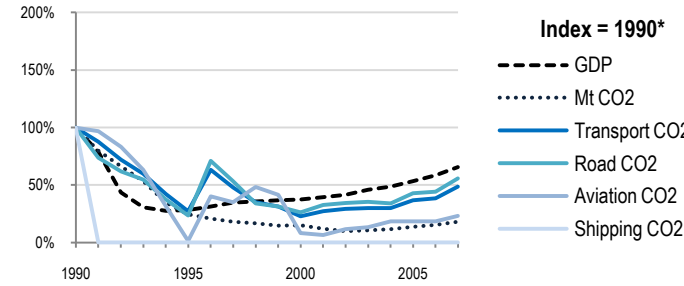
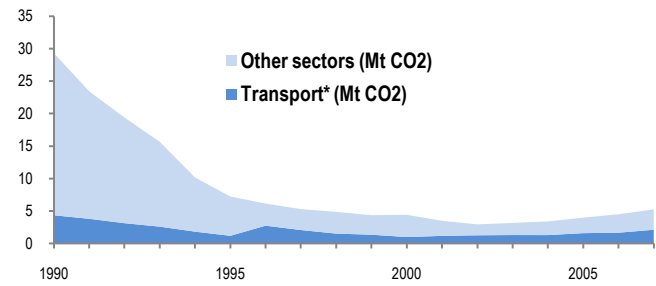
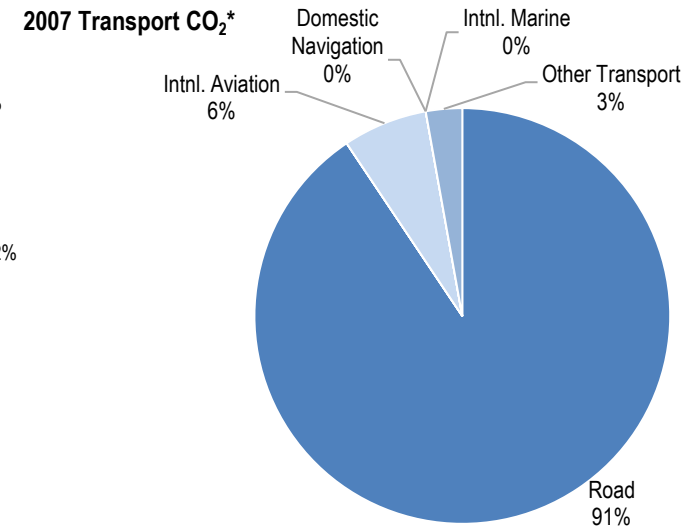
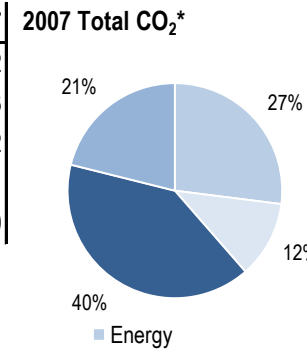
Asia-Pacific

ITF-other

Top 10 non-ITF

5.3 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-82%	5.26	-78%	1.20	-73%	0.32
Transport CO ₂	-51%	2.12	-40%	0.48	-26%	0.13
Road CO ₂	-44%	1.93	-31%	0.44	-15%	0.12
Aviation CO ₂	-77%	0.14	-71%	0.03	-64%	0.01
Shipping CO ₂	..	0	..	0.00	..	0.00



Transport and the Economy

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	5.46	5.03	4.72	4.67	4.61	4.56	4.52	4.47	4.43	4.40	-19%	-1.26%
GDP PPP (billion 2000 US dollars)	25.15	7.11	9.43	9.89	10.43	11.58	12.26	13.44	14.70	16.52	-34%	-2.44%
Road passenger km (million pkm)	0	0	0	0	0	0	0	0	0	0	..	..
Road and Rail freight tkm (million tkm)	13411	1376	4388	5000	5617	6009	5425	6723	7979	7521	-44%	-3.34%
Road pkm/capita	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..
Road and Rail freight tkm/\$ of GDP	0.53	0.19	0.47	0.51	0.54	0.52	0.44	0.50	0.54	0.46	-15%	-0.93%
Passenger cars per 1000 inhabitants	89	67	52	53	55	56	..	..	..	..	..	-3.50%

CO2 Emissions

IEA CO ₂ from fuel combustion (Mt)*	29.29	7.23	4.42	3.5	2.95	3.17	3.4	3.99	4.5	5.26	-82%	-9.61%
... of which transport CO ₂ (Mt)*	4.35	1.19	1	1.18	1.27	1.31	1.3	1.6	1.67	2.12	-51%	-4.14%
<i>Transport* as a percentage of total</i>	14.9%	16.5%	22.6%	33.7%	43.1%	41.3%	38.2%	40.1%	37.1%	40.3%		
Road (Mt)	3.46	0.82	0.91	1.13	1.19	1.22	1.18	1.48	1.53	1.93	-44%	-3.38%
Rail (Mt)	0.11	0.2	0.03	0	0	0	0	0	0	0	-100%	..
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0.6	0.01	0.05	0.04	0.07	0.08	0.11	0.11	0.11	0.14	-77%	-8.20%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0	0.16	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0.18	0	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.06	-67%	-6.26%

GHG Emissions

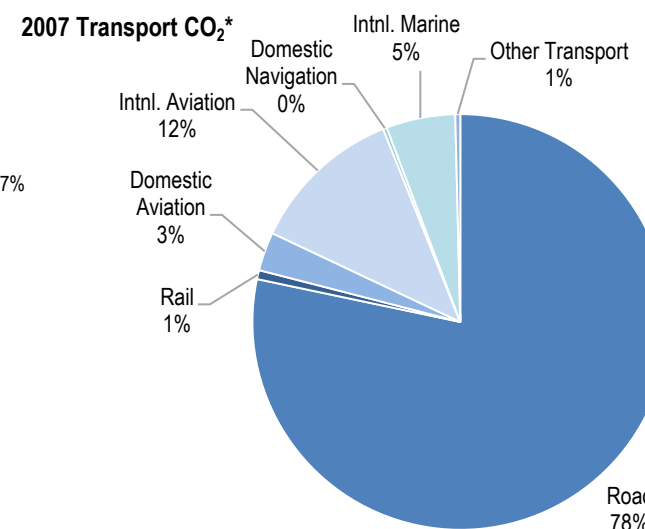
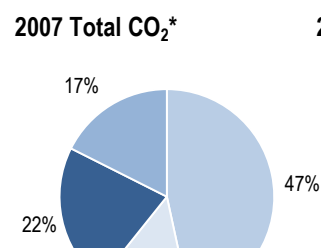
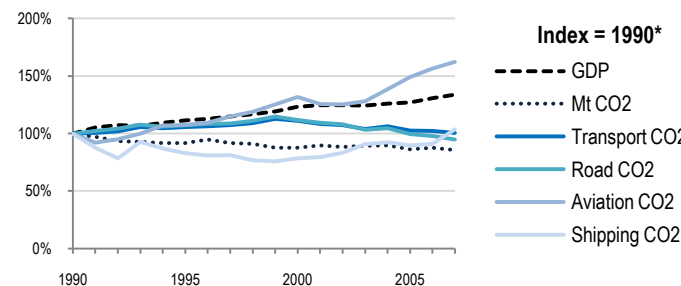
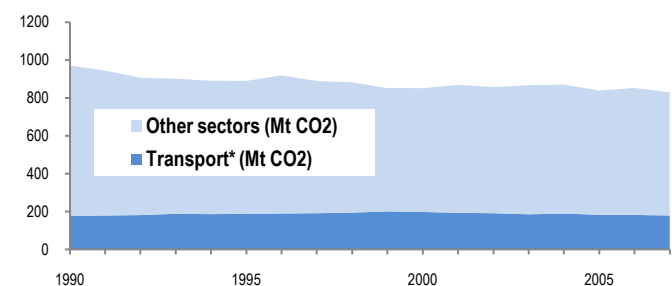
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Germany

EU-27 829.6 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-15%	829.55	-18%	10.08	-36%	0.36
Transport CO ₂	1%	179.8	-3%	2.19	-25%	0.08
Road CO ₂	-5%	140.81	-9%	1.71	-29%	0.06
Aviation CO ₂	62%	26.86	56%	0.33	21%	0.01
Shipping CO ₂	4%	10.18	0%	0.12	-23%	0.00



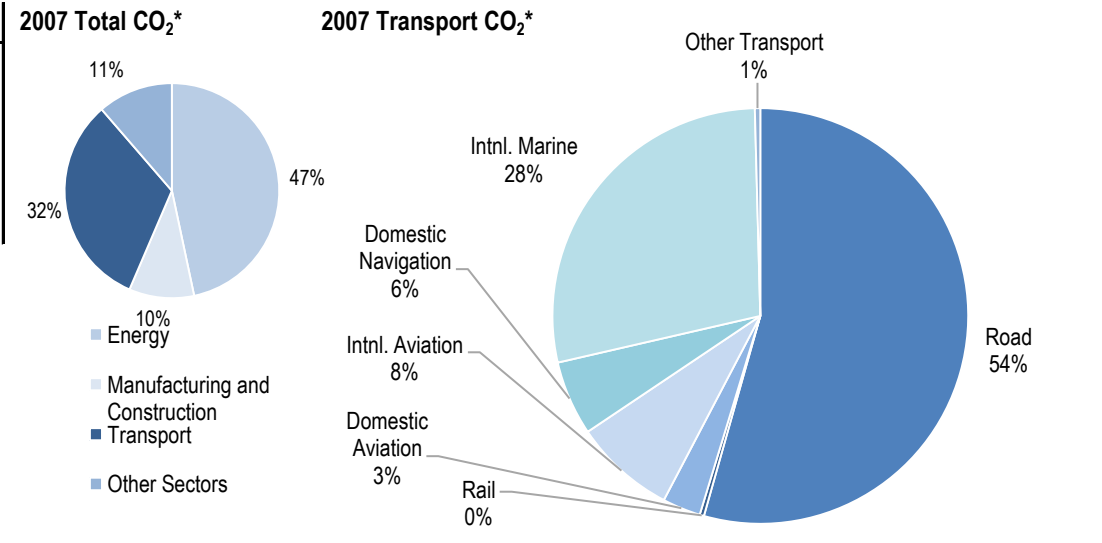
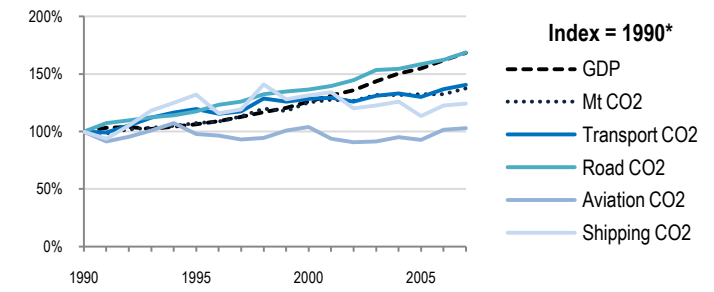
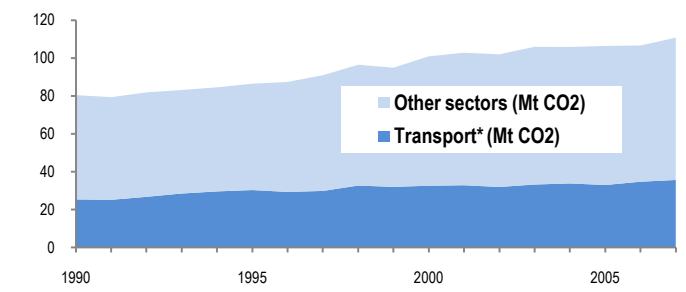
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	79.36	81.66	82.19	82.34	82.48	82.52	82.50	82.46	82.37	82.26	4%	0.21%
GDP PPP (billion 2000 US dollars)	1729.99	1928.71	2130.23	2156.64	2156.64	2151.96	2177.94	2194.77	2259.75	2315.34	34%	1.73%
Road passenger km (million pkm)	649800	883800	900300	921300	930500	925200	936506	923963	929484	933387	44%	2.15%
Road and Rail freight tkm (million tkm)	273000	308015	358199	365120	361490	370759	390153	405535	437016	458054	68%	3.09%
Road pkm/capita	8188.00	10822.92	10953.89	11188.97	11281.52	11211.83	11351.59	11204.98	11284.25	11346.79	39%	1.94%
Road and Rail freight tkm/\$ of GDP	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.18	0.19	0.20	25%	1.34%
Passenger cars per 1000 inhabitants	386	495	515	539	541	541	546	550	565	..	..	2.41%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	970.79	889.89	851.38	868.92	856.85	867.14	870.03	838.79	852.26	829.55	-15%	-0.92%
... of which transport CO ₂ (Mt)*	178.73	188.76	198.23	193.58	191.66	185.83	189.73	183.25	182.57	179.8	1%	0.04%
Transport* as a percentage of total	18.4%	21.2%	23.3%	22.3%	22.4%	21.4%	21.8%	21.8%	21.4%	21.7%		
Road (Mt)	148.66	159.69	166.14	162.44	160.31	153.42	155.51	147.69	145.61	140.81	-5%	-0.32%
Rail (Mt)	2.92	2.27	1.79	1.8	1.69	1.57	1.5	1.34	1.38	1.26	-57%	-4.82%
Domestic Aviation (Mt)	3.98	3.61	4.42	4.22	4.19	4.29	4.62	4.97	5.22	5.41	36%	1.82%
International Aviation (Mt)	12.58	14.13	17.39	16.59	16.53	16.92	18.29	19.69	20.69	21.45	71%	3.19%
Domestic Navigation (Mt)	2.03	1.71	0.86	0.83	0.72	0.72	0.72	0.98	0.84	0.52	-74%	-7.70%
International Shipping (Mt)	7.79	6.43	6.85	6.96	7.46	8.17	8.36	7.83	8.11	9.66	24%	1.27%
Other Transport (Mt)	0.77	0.91	0.77	0.73	0.75	0.74	0.73	0.74	0.73	0.7	-9%	-0.56%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	1234.76	1106.13	1034.82	1051.54	1033.30	1035.20	1027.47	1000.56	1013.12	991.79	-20%	-1.28%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	979.76	869.13	832.93	854.84	840.71	843.75	834.88	810.67	824.58	798.52	-18%	-1.20%
... of which transport GHG (Mt CO ₂ eq.)*	184.12	199.18	209.13	204.91	203.83	198.62	199.83	192.44	189.74	188.85	3%	0.15%
Road (Mt)	152.24	167.18	173.07	169.49	167.69	161.39	161.22	152.47	148.39	145.34	-5%	-0.27%
International Aviation (Mt)	11.49	14.64	19.62	19.26	19.23	19.65	21.59	23.55	24.72	25.65	123%	4.84%
International Shipping (Mt)	8.06	6.60	7.04	7.17	7.67	8.45	8.66	8.12	8.40	10.02	24%	1.29%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Greece



Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	38%	110.71	27%	9.89	-18%	0.41
Transport CO ₂	40%	35.65	30%	3.19	-17%	0.13
Road CO ₂	69%	19.39	56%	1.73	0%	0.07
Aviation CO ₂	3%	3.88	-5%	0.35	-39%	0.01
Shipping CO ₂	24%	12.12	15%	1.08	-26%	0.05



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	10.34	10.63	10.92	10.95	10.99	11.02	11.06	11.10	11.15	11.19	8%	0.47%
GDP PPP (billion 2000 US dollars)	159.27	169.45	200.76	209.19	216.38	228.46	239.69	246.64	257.73	268.13	68%	3.11%
Road passenger km (million pkm)	24233	31452	40458	41083	41811	42029	42596	42484	42309	42577	76%	3.37%
Road and Rail freight tkm (million tkm)	13095	12662	14717	14803	15027	15156	16065	16474	17172	18194	39%	1.95%
Road pkm/capita	2343.62	2958.80	3704.95	3751.87	3804.46	3813.88	3851.36	3827.39	3794.53	3804.92	62%	2.89%
Road and Rail freight tkm/\$ of GDP	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	-17%	-1.12%
Passenger cars per 1000 inhabitants	171	211	293	312	331	348	368	388	409	..	..	5.60%

CO ₂ Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
IEA CO ₂ from fuel combustion (Mt)*	80.44	86.43	100.88	102.78	101.95	105.91	105.84	106.36	106.6	110.71	38%	1.90%
... of which transport CO ₂ (Mt)*	25.4	30.33	32.63	32.87	31.97	33.25	33.82	32.99	34.73	35.65	40%	2.01%
<i>Transport* as a percentage of total</i>	31.6%	35.1%	32.3%	32.0%	31.4%	31.4%	32.0%	31.0%	32.6%	32.2%		
Road (Mt)	11.5	13.52	15.7	16.05	16.62	17.64	17.74	18.22	18.64	19.39	69%	3.12%
Rail (Mt)	0.2	0.14	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.12	-40%	-2.96%
Domestic Aviation (Mt)	1.43	1.17	1.51	1.29	1.18	1.12	1.19	1.19	1.07	1.06	-26%	-1.75%
International Aviation (Mt)	2.34	2.52	2.41	2.24	2.24	2.32	2.39	2.3	2.76	2.82	21%	1.10%
Domestic Navigation (Mt)	1.78	1.71	1.54	2.1	1.9	1.88	2.11	2.02	2.22	2.07	16%	0.89%
International Shipping (Mt)	7.97	11.17	11.28	10.96	9.83	10.07	10.16	9.02	9.74	10.05	26%	1.37%
Other Transport (Mt)	0.18	0.1	0.07	0.1	0.08	0.09	0.1	0.11	0.17	0.15	-17%	-1.07%

GHG Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
UNFCCC GHG emissions (Mt CO ₂ eq.)*	116.14	124.19	141.13	141.70	140.12	144.59	144.82	143.41	140.87	144.92	25%	1.31%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	87.71	94.39	110.60	112.42	111.00	116.03	116.31	115.28	115.19	119.50	36%	1.84%
... of which transport GHG (Mt CO ₂ eq.)*	25.37	30.88	33.56	33.90	32.93	35.00	35.51	33.68	35.73	36.81	45%	2.21%
Road (Mt)	11.99	14.13	16.48	16.85	17.42	18.42	18.48	18.66	19.22	20.11	68%	3.09%
International Aviation (Mt)	2.47	2.64	2.53	2.35	2.35	3.06	3.14	2.41	2.89	2.95	19%	1.04%
International Shipping (Mt)	8.11	11.37	11.47	11.14	9.99	10.23	10.32	9.17	9.90	10.11	25%	1.31%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

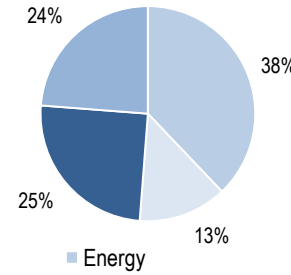
REDUCING TRANSPORT GHG EMISSIONS - Trends & Data 2010. © OECD/ITF 2010

Hungary

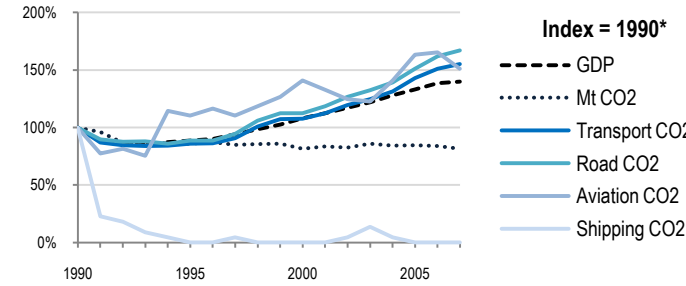
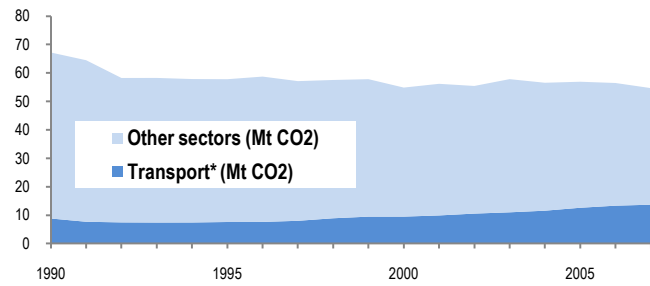
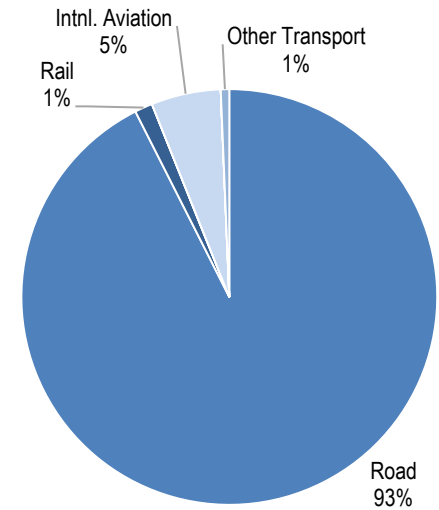
EU-27 54.7 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-19%	54.67	-16%	5.43	-42%	0.34
Transport CO ₂	55%	13.67	60%	1.36	11%	0.08
Road CO ₂	67%	12.65	72%	1.26	19%	0.08
Aviation CO ₂	51%	0.74	56%	0.07	8%	0.00
Shipping CO ₂	-100%	0	-100%	0.00	-100%	0.00

2007 Total CO₂*



2007 Transport CO₂*



Transport and the Economy

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	10.37	10.33	10.21	10.19	10.16	10.13	10.11	10.09	10.07	10.06	-3%	-0.18%
GDP PPP (billion 2000 US dollars)	115.98	102.90	125.27	130.36	135.76	141.50	148.35	154.23	160.58	162.30	40%	2.00%
Road passenger km (million pkm)	71104	64542	64622	64506	64702	64965	64858	64159	64497	58286	-18%	-1.16%
Road and Rail freight tkm (million tkm)	31940	21377	20241	19580	18360	18779	19728	20490	22586	23311	-27%	-1.84%
Road pkm/capita	6856.70	6248.02	6329.29	6330.32	6368.31	6413.13	6415.23	6358.67	6404.87	5793.84	-16%	-0.99%
Road and Rail freight tkm/\$ of GDP	0.28	0.21	0.16	0.15	0.14	0.13	0.13	0.13	0.14	0.14	-48%	-3.76%
Passenger cars per 1000 inhabitants	188	223	232	256	259	274	..	..	292	..	..	2.79%

CO2 Emissions

IEA CO ₂ from fuel combustion (Mt)*	67.19	57.8	54.85	56.18	55.43	57.82	56.55	56.91	56.47	54.67	-19%	-1.21%
... of which transport CO ₂ (Mt)*	8.81	7.58	9.47	9.89	10.53	10.98	11.56	12.59	13.32	13.67	55%	2.62%
Transport* as a percentage of total	13.1%	13.1%	17.3%	17.6%	19.0%	19.0%	20.4%	22.1%	23.6%	25.0%		
Road (Mt)	7.58	6.72	8.52	8.99	9.6	10.03	10.54	11.46	12.27	12.65	67%	3.06%
Rail (Mt)	0.52	0.32	0.26	0.25	0.24	0.23	0.22	0.2	0.19	0.19	-63%	-5.75%
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0.01	0.01	0	..	..
International Aviation (Mt)	0.49	0.54	0.69	0.65	0.61	0.6	0.69	0.79	0.8	0.74	51%	2.45%
Domestic Navigation (Mt)	0.22	0	0	0	0.01	0.03	0.01	0	0	0	-100%	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0	0	0	0	0.08	0.08	0.1	0.13	0.05	0.09	..	..

GHG Emissions

UNFCCC GHG emissions (Mt CO ₂ eq.)*	99.71	80.39	78.68	80.30	78.60	81.85	80.54	81.08	79.55	76.69	-23%	-1.53%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	69.01	59.46	56.39	57.81	56.73	59.91	57.97	59.16	57.76	55.52	-20%	-1.27%
... of which transport GHG (Mt CO ₂ eq.)*	8.96	7.74	9.61	9.84	10.31	10.67	11.20	12.93	13.37	13.58	52%	2.48%
Road (Mt)	7.90	6.86	8.68	9.03	9.48	9.80	10.34	12.05	12.48	12.64	60%	2.80%
International Aviation (Mt)	0.50	0.55	0.66	0.56	0.60	0.62	0.64	0.69	0.68	0.75	51%	2.46%
International Shipping (Mt)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Iceland

EU-27

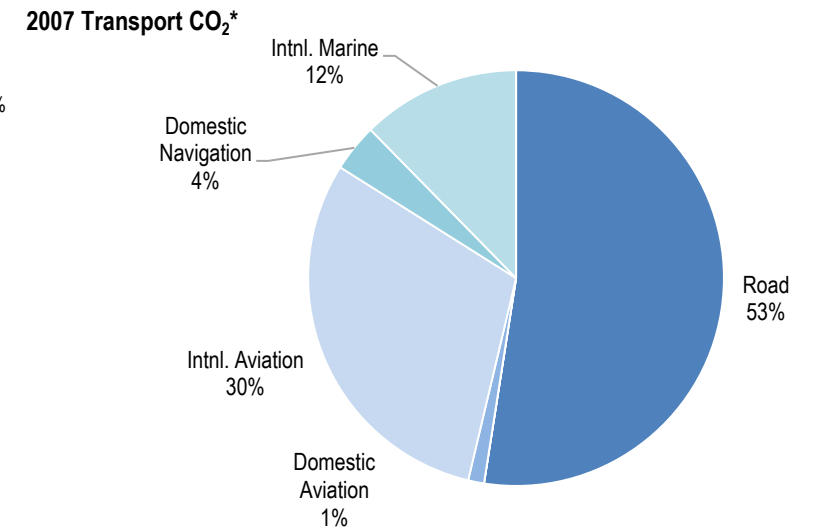
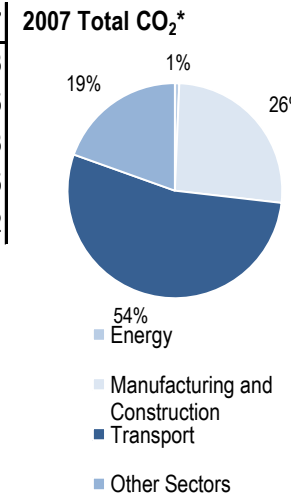
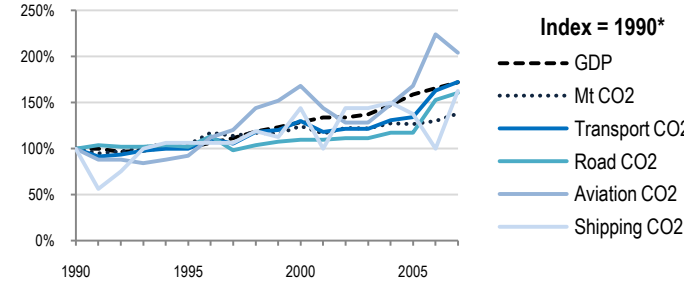
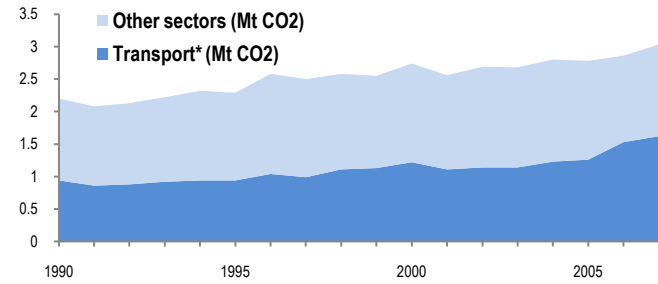
N. America

Asia-Pacific

ITF-other

Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	38%	3.03	16%	9.77	-20%	0.28
Transport CO ₂	72%	1.62	45%	5.23	0%	0.15
Road CO ₂	60%	0.85	35%	2.74	-7%	0.08
Aviation CO ₂	104%	0.51	71%	1.65	19%	0.05
Shipping CO ₂	63%	0.26	36%	0.84	-5%	0.02



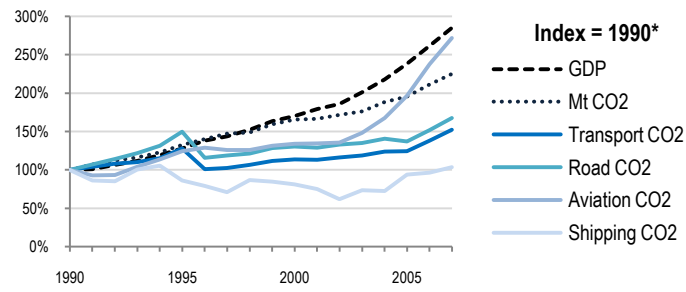
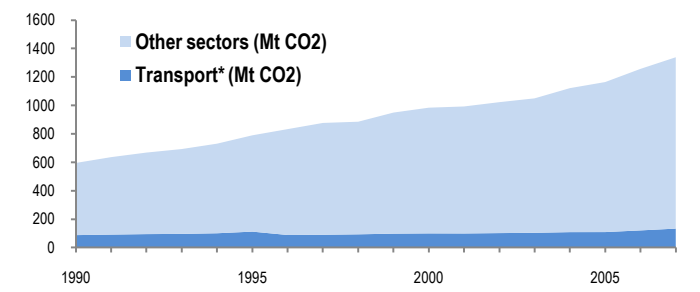
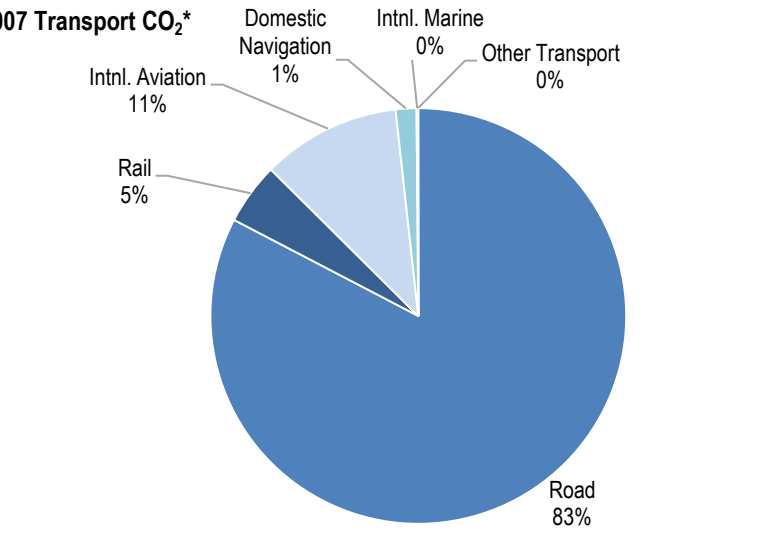
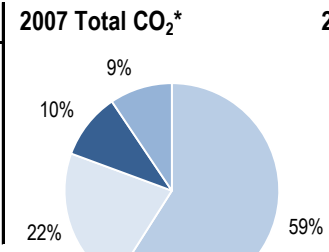
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	0.26	0.27	0.28	0.29	0.29	0.29	0.29	0.30	0.30	0.31	19%	1.04%
GDP PPP (billion 2000 US dollars)	6.30	6.38	8.10	8.42	8.43	8.63	9.29	9.99	10.43	10.83	72%	3.24%
Road passenger km (million pkm)	3004	3467	4250	4458	4583	4711	4855	5145	5455	5728	91%	3.87%
Road and Rail freight tkm (million tkm)	0	0	0	0	0	0	0	0	0	0	..	..
Road pkm/capita	11553.85	12840.74	15178.57	15372.41	15803.45	16244.83	16741.38	17150.00	18183.33	18477.42	60%	2.80%
Road and Rail freight tkm/\$ of GDP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..
Passenger cars per 1000 inhabitants	470	445	566	561	562	576	601	632	..	..	..	1.99%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	2.2	2.29	2.74	2.56	2.69	2.68	2.8	2.78	2.86	3.03	38%	1.90%
... of which transport CO ₂ (Mt)*	0.94	0.94	1.22	1.11	1.14	1.14	1.23	1.26	1.53	1.62	72%	3.25%
Transport* as a percentage of total	42.7%	41.0%	44.5%	43.4%	42.4%	42.5%	43.9%	45.3%	53.5%	53.5%		
Road (Mt)	0.53	0.54	0.58	0.58	0.59	0.59	0.62	0.62	0.81	0.85	60%	2.82%
Rail (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.02	-33%	-2.36%
International Aviation (Mt)	0.22	0.2	0.39	0.34	0.3	0.3	0.35	0.4	0.53	0.49	123%	4.82%
Domestic Navigation (Mt)	0.06	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.05	0.06	0%	0.00%
International Shipping (Mt)	0.1	0.14	0.21	0.14	0.21	0.21	0.22	0.2	0.11	0.2	100%	4.16%
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	3.72	3.56	4.36	4.20	4.25	4.17	4.32	4.23	4.88	5.21	40%	2.00%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	2.03	2.21	2.51	2.35	2.44	2.41	2.58	2.50	2.65	2.80	38%	1.91%
... of which transport GHG (Mt CO ₂ eq.)*	0.93	1.00	1.29	1.17	1.20	1.25	1.41	1.37	1.62	1.74	87%	3.76%
Road (Mt)	0.52	0.55	0.62	0.63	0.64	0.71	0.75	0.79	0.90	0.93	81%	3.55%
International Aviation (Mt)	0.22	0.24	0.41	0.35	0.31	0.34	0.38	0.43	0.50	0.52	133%	5.10%
International Shipping (Mt)	0.10	0.15	0.22	0.15	0.21	0.15	0.20	0.11	0.14	0.21	109%	4.43%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

India

EU-27 N. America Asia-Pacific **ITF-other** Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	125%	1338.58	70%	1.19	-21%	0.33
Transport CO ₂	52%	133.25	15%	0.12	-47%	0.03
Road CO ₂	67%	110.12	27%	0.10	-41%	0.03
Aviation CO ₂	172%	14.38	106%	0.01	-5%	0.00
Shipping CO ₂	4%	2.3	-22%	0.00	-64%	0.00



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	849.52	932.18	1015.92	1032.47	1048.64	1064.40	1079.72	1094.58	1109.81	1123.32	32%	1.66%
GDP PPP (billion 2000 US dollars)	1411.90	1809.11	2402.02	2527.33	2622.53	2842.06	3077.33	3365.13	3690.51	4024.89	185%	6.36%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	2	4	6	7	7	8	..	..	..	..	..	11.25%

CO2 Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
IEA CO ₂ from fuel combustion (Mt)*	595.03	789.49	983.8	992.39	1022.58	1049.51	1121.21	1164.05	1256.66	1338.58	125%	4.88%
... of which transport CO ₂ (Mt)*	87.49	112.05	99.52	99	101.63	103.82	108.36	108.75	120.59	133.25	52%	2.51%
Transport* as a percentage of total	14.7%	14.2%	10.1%	10.0%	9.9%	9.9%	9.7%	9.3%	9.6%	10.0%		
Road (Mt)	65.78	98.52	85.79	84.83	87.51	88.84	92.59	90.25	99.95	110.12	67%	3.08%
Rail (Mt)	14.11	5	4.62	5.08	5.34	5.21	5.17	5.97	5.9	6.41	-55%	-4.54%
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	5.29	6.57	7.1	7.12	7.16	7.84	8.87	10.4	12.57	14.38	172%	6.06%
Domestic Navigation (Mt)	1.75	1.52	1.53	1.55	1.27	1.44	1.52	2	2.09	2.15	23%	1.22%
International Shipping (Mt)	0.47	0.39	0.27	0.12	0.1	0.19	0.09	0.08	0.05	0.15	-68%	-6.50%
Other Transport (Mt)	0.09	0.04	0.21	0.29	0.25	0.3	0.12	0.05	0.03	0.03	-67%	-6.26%

GHG Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
UNFCCC GHG emissions (Mt CO ₂ eq.)*
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*
... of which transport GHG (Mt CO ₂ eq.)*
Road (Mt)
International Aviation (Mt)
International Shipping (Mt)

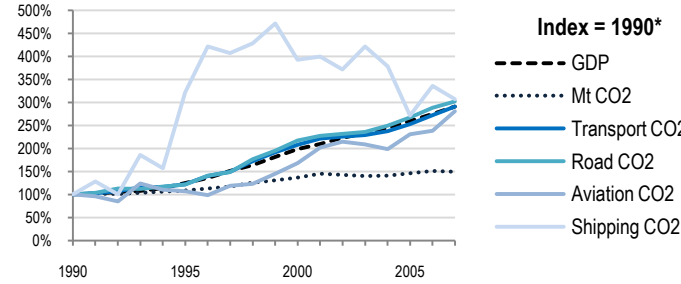
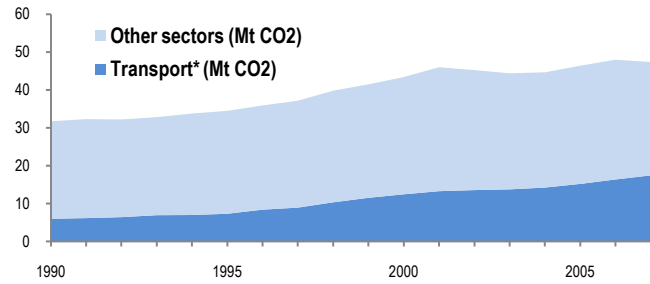
* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

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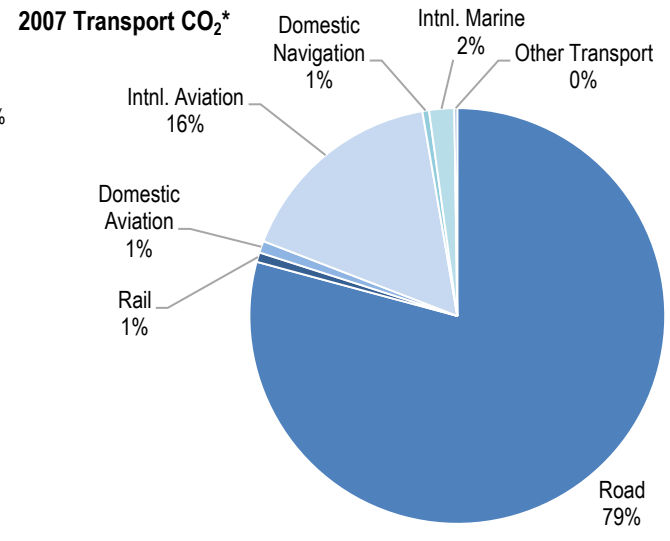
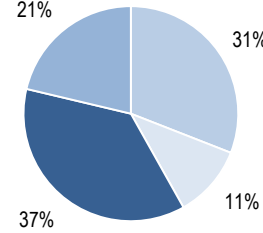
Ireland

EU-27 47.3 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	49%	47.35	20%	10.86	-49%	0.30
Transport CO ₂	191%	17.45	134%	4.00	0%	0.11
Road CO ₂	202%	13.82	143%	3.17	4%	0.09
Aviation CO ₂	181%	3.03	126%	0.69	-4%	0.02
Shipping CO ₂	207%	0.43	147%	0.10	5%	0.00



2007 Total CO ₂ *	2007 Transport CO ₂ *
Energy 21%	Domestic Aviation 1%
Manufacturing and Construction 31%	Intl. Aviation 16%
Transport 37%	Domestic Navigation 1%
Other Sectors 11%	Intl. Marine 2%
	Other Transport 0%
	Rail 1%
	Road 79%



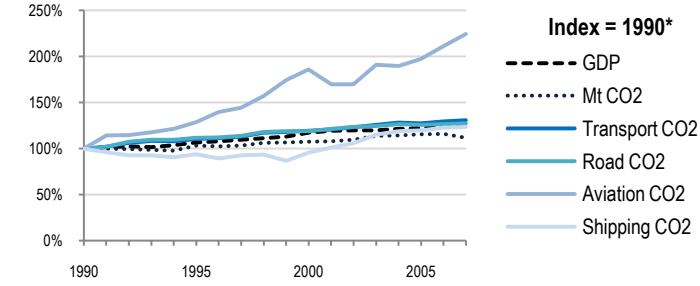
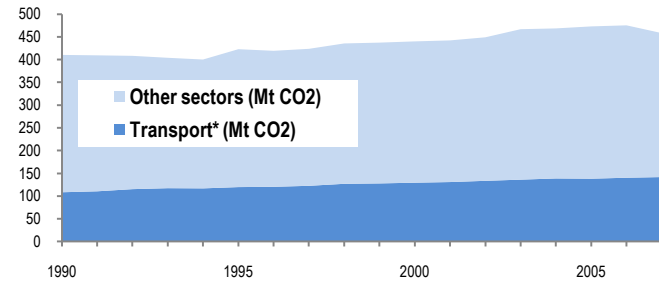
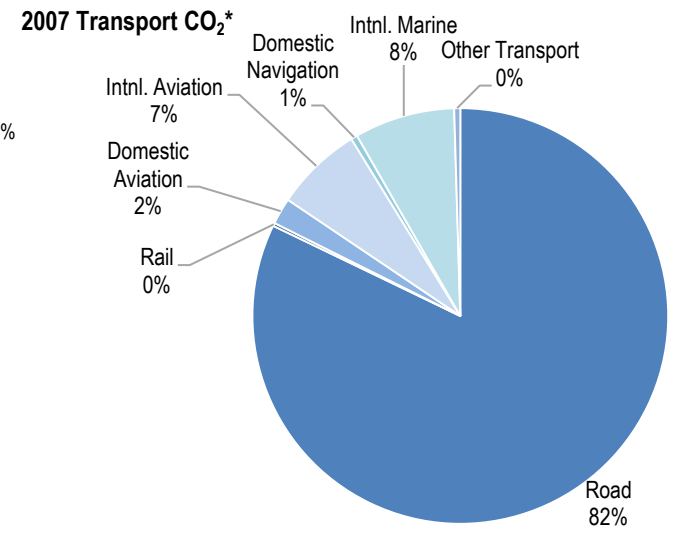
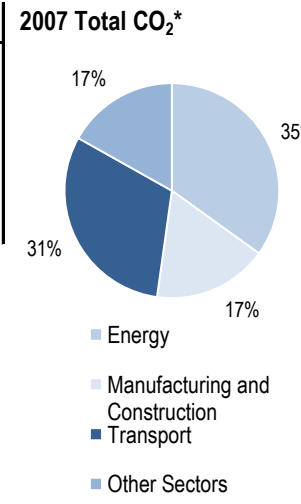
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	3.51	3.60	3.80	3.86	3.93	3.99	4.06	4.15	4.25	4.36	24%	1.28%
GDP PPP (billion 2000 US dollars)	54.89	68.84	108.86	115.16	122.57	128.10	134.13	142.68	150.82	159.91	191%	6.49%
Road passenger km (million pkm)	0	0	0	0	0	0	0	0	0	0	..	..
Road and Rail freight tkm (million tkm)	5719	6095	12839	12921	14874	16296	17688	18455	17893	19275	237%	7.41%
Road pkm/capita	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..
Road and Rail freight tkm/\$ of GDP	0.10	0.09	0.12	0.11	0.12	0.13	0.13	0.13	0.12	0.12	16%	0.86%
Passenger cars per 1000 inhabitants	227	265	347	363	374	382	..	..	..	..	..	4.08%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	31.72	34.47	43.39	45.97	45.23	44.38	44.64	46.38	47.96	47.35	49%	2.38%
... of which transport CO ₂ (Mt)*	6	7.33	12.46	13.29	13.57	13.76	14.24	15.2	16.37	17.45	191%	6.48%
Transport* as a percentage of total	18.9%	21.3%	28.7%	28.9%	30.0%	31.0%	31.9%	32.8%	34.1%	36.9%		
Road (Mt)	4.57	5.55	9.93	10.38	10.58	10.77	11.41	12.21	13.19	13.82	202%	6.73%
Rail (Mt)	0.14	0.15	0.12	0.12	0.12	0.12	0.12	0.12	0.13	0.13	-7%	-0.43%
Domestic Aviation (Mt)	0.05	0.05	0.09	0.11	0.12	0.11	0.11	0.14	0.18	0.16	220%	7.08%
International Aviation (Mt)	1.03	1.11	1.73	2.07	2.2	2.15	2.04	2.35	2.4	2.87	179%	6.21%
Domestic Navigation (Mt)	0.08	0.09	0.08	0.06	0.06	0.06	0.06	0.06	0.09	0.09	13%	0.70%
International Shipping (Mt)	0.06	0.36	0.47	0.5	0.46	0.53	0.47	0.32	0.38	0.34	467%	10.74%
Other Transport (Mt)	0.06	0.02	0.04	0.03	0.03	0.02	0.03	0.01	0.01	0.04	-33%	-2.36%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	56.51	60.72	71.23	73.33	71.53	71.38	71.22	73.07	72.96	72.59	28%	1.48%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	32.45	35.85	45.61	48.18	47.03	46.79	47.29	49.24	49.25	49.48	53%	2.51%
... of which transport GHG (Mt CO ₂ eq.)*	6.30	7.80	13.07	13.98	14.25	14.46	14.90	15.86	17.01	17.77	182%	6.29%
Road (Mt)	4.80	5.86	10.34	10.79	11.07	11.23	11.84	12.58	13.32	13.97	191%	6.48%
International Aviation (Mt)	1.07	1.15	1.81	2.17	2.32	2.27	2.14	2.48	2.87	3.03	183%	6.30%
International Shipping (Mt)	0.06	0.37	0.48	0.51	0.46	0.54	0.47	0.33	0.40	0.36	529%	11.42%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Italy

EU-27 458.2 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	12%	458.24	7%	7.72	-12%	0.29
Transport CO ₂	31%	141.76	25%	2.39	4%	0.09
Road CO ₂	27%	116.45	22%	1.96	1%	0.07
Aviation CO ₂	125%	12.53	115%	0.21	78%	0.01
Shipping CO ₂	24%	11.78	18%	0.20	-2%	0.01



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	56.72	56.84	56.94	56.98	57.16	57.61	58.18	58.61	58.94	59.32	5%	0.26%
GDP PPP (billion 2000 US dollars)	1243.79	1324.89	1455.71	1482.17	1488.90	1488.65	1511.45	1519.83	1547.81	1570.36	26%	1.38%
Road passenger km (million pkm)	606549	701860	820079	813276	808678	809307	815820	790209	847909	871303	44%	2.15%
Road and Rail freight tkm (million tkm)	199115	219377	184401	179139	183096	165637	180367	194315	204682	217512	9%	0.52%
Road pkm/capita	10693.74	12347.99	14402.51	14273.01	14147.62	14048.03	14022.34	13482.49	14385.97	14688.18	37%	1.88%
Road and Rail freight tkm/\$ of GDP	0.16	0.17	0.13	0.12	0.12	0.11	0.12	0.13	0.13	0.14	-13%	-0.85%
Passenger cars per 1000 inhabitants	476	524	545	576	584	..	590	595	..	..	..	1.50%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	410.23	422.8	439.95	442.12	448.95	466.75	468.53	472.91	475.3	458.24	12%	0.65%
... of which transport CO ₂ (Mt)*	108.35	119.7	129.36	130.8	133.5	136.05	138.69	138.19	140.27	141.76	31%	1.59%
Transport* as a percentage of total	26.4%	28.3%	29.4%	29.6%	29.7%	29.1%	29.6%	29.2%	29.5%	30.9%		
Road (Mt)	91.46	102.18	108.72	110.89	113.14	113.61	115.85	114.82	115.88	116.45	27%	1.43%
Rail (Mt)	0.61	0.6	0.43	0.37	0.38	0.41	0.36	0.3	0.35	0.33	-46%	-3.55%
Domestic Aviation (Mt)	1.51	1.63	2.61	2.49	2.59	2.69	2.59	2.56	2.79	2.92	93%	3.96%
International Aviation (Mt)	4.07	5.55	7.75	6.98	6.88	7.97	7.98	8.45	9	9.61	136%	5.18%
Domestic Navigation (Mt)	1.16	1.34	0.62	0.79	0.72	0.88	0.77	0.77	0.74	0.71	-39%	-2.85%
International Shipping (Mt)	8.37	7.59	8.49	8.84	9.37	10.08	10.54	10.64	10.95	11.07	32%	1.66%
Other Transport (Mt)	1.16	0.82	0.73	0.44	0.42	0.4	0.61	0.65	0.55	0.67	-42%	-3.18%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	524.95	539.48	561.83	567.89	568.73	585.35	589.38	589.85	580.40	571.11	9%	0.50%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	416.81	431.70	454.03	459.73	461.95	477.83	481.45	482.84	479.62	469.77	13%	0.71%
... of which transport GHG (Mt CO ₂ eq.)*	111.91	124.04	135.27	137.89	139.81	142.60	145.12	143.97	146.60	147.53	32%	1.64%
Road (Mt)	95.25	106.20	113.06	115.67	117.74	118.73	120.71	118.86	120.14	120.56	27%	1.40%
International Aviation (Mt)	4.20	5.72	8.09	8.09	7.38	8.60	8.69	9.18	9.91	10.51	150%	5.54%
International Shipping (Mt)	4.43	4.07	4.22	4.86	5.60	6.34	6.87	6.99	7.52	7.83	77%	3.41%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

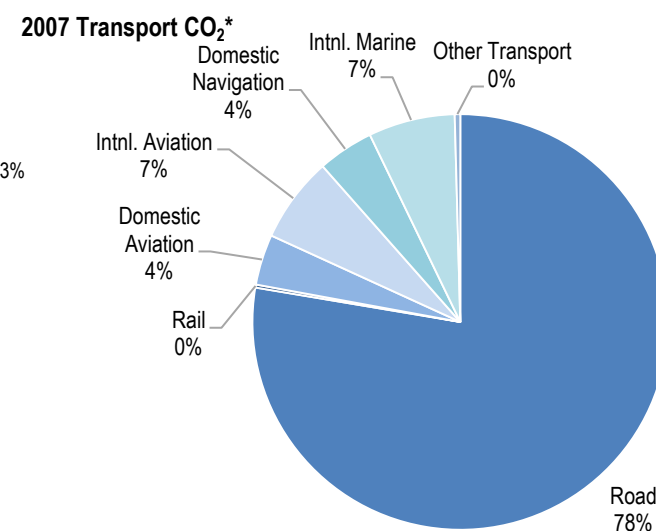
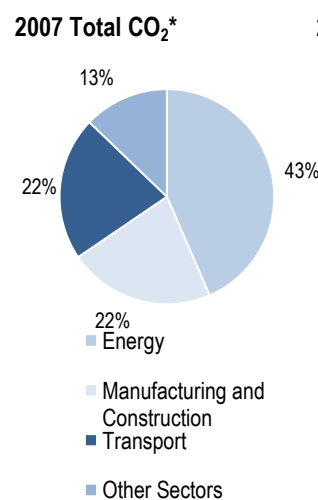
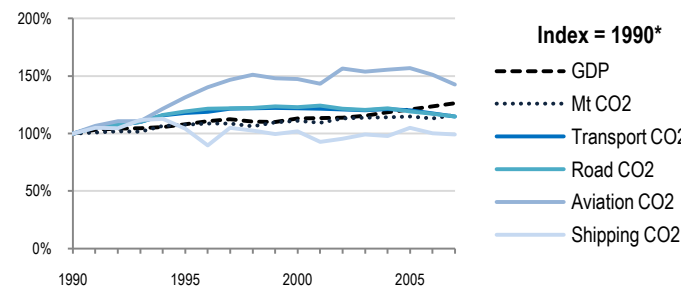
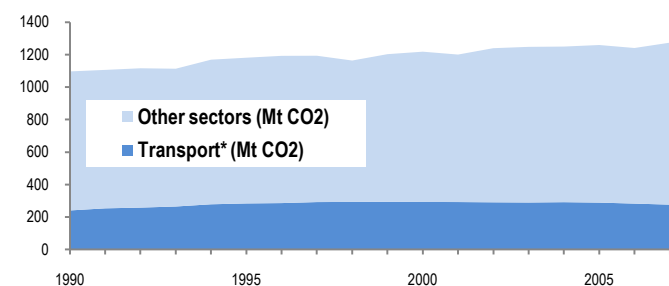
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Japan

EU-27 N. America **Asia-Pacific** ITF-other Top 10 non-ITF

1273.3 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	16%	1273.34	12%	9.97	-8%	0.35
Transport CO ₂	15%	276.38	11%	2.16	-9%	0.08
Road CO ₂	15%	214.61	11%	1.68	-9%	0.06
Aviation CO ₂	43%	29.28	38%	0.23	13%	0.01
Shipping CO ₂	-1%	30.65	-4%	0.24	-21%	0.01



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	123.48	125.47	126.84	127.15	127.45	127.72	127.76	127.77	127.76	127.76	3%	0.20%
GDP PPP (billion 2000 US dollars)	2867.16	3091.83	3246.29	3252.27	3260.80	3306.90	3397.65	3463.36	3546.39	3620.16	26%	1.38%
Road passenger km (million pkm)	853060	917419	951251	954293	955412	954186	947563	933005	917938	919062	8%	0.44%
Road and Rail freight tkm (million tkm)	301440	319749	335254	335265	334159	344656	350108	357792	369726	378134	25%	1.34%
Road pkm/capita	6908.49	7311.86	7499.61	7505.25	7496.37	7470.92	7416.74	7302.22	7184.86	7193.66	4%	0.24%
Road and Rail freight tkm/\$ of GDP	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	-1%	-0.04%
Passenger cars per 1000 inhabitants	283	356	413	421	428	433	441	..	..	..	..	3.22%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	1096.31	1180.78	1217.9	1200.15	1239.26	1247.59	1249.4	1258.94	1240.42	1273.34	16%	0.88%
... of which transport CO ₂ (Mt)*	240.63	283.73	293.07	292.31	290.67	289.52	291.49	288.93	282.81	276.38	15%	0.82%
Transport* as a percentage of total	21.9%	24.0%	24.1%	24.4%	23.5%	23.2%	23.3%	23.0%	22.8%	21.7%		
Road (Mt)	186.87	222.63	229.49	232.36	227.18	225.48	227.51	222.48	219.01	214.61	15%	0.82%
Rail (Mt)	0.94	0.82	0.71	0.68	0.67	0.63	0.66	0.65	0.65	0.65	-31%	-2.15%
Domestic Aviation (Mt)	7.23	10.37	10.69	10.74	10.95	11.08	10.68	10.82	11.21	10.89	51%	2.44%
International Aviation (Mt)	13.31	16.61	19.57	18.67	21.18	20.52	21.22	21.37	19.84	18.39	38%	1.92%
Domestic Navigation (Mt)	13.21	14.25	14.49	14.04	14.17	13.78	12.6	12.61	12.27	12.04	-9%	-0.54%
International Shipping (Mt)	17.66	17.92	16.93	14.63	15.33	16.84	17.63	19.81	18.63	18.61	5%	0.31%
Other Transport (Mt)	1.42	1.13	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	-16%	-1.03%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	1300.80	1379.80	1383.11	1354.41	1390.82	1397.64	1394.53	1399.84	1381.50	1411.94	9%	0.48%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	1106.97	1193.59	1227.11	1211.40	1255.05	1261.67	1263.29	1269.95	1249.93	1281.73	16%	0.87%
... of which transport GHG (Mt CO ₂ eq.)*	246.70	294.69	301.17	300.34	298.08	296.50	297.74	294.99	288.93	282.27	14%	0.80%
Road (Mt)	193.40	229.98	237.46	240.28	234.45	232.44	233.68	228.33	224.76	220.32	14%	0.77%
International Aviation (Mt)	13.33	17.10	19.75	18.92	21.37	20.60	21.41	21.56	20.17	18.55	39%	1.96%
International Shipping (Mt)	17.82	21.47	17.36	15.00	15.74	17.29	18.11	20.43	19.22	19.14	7%	0.42%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Korea

EU-27

N. America

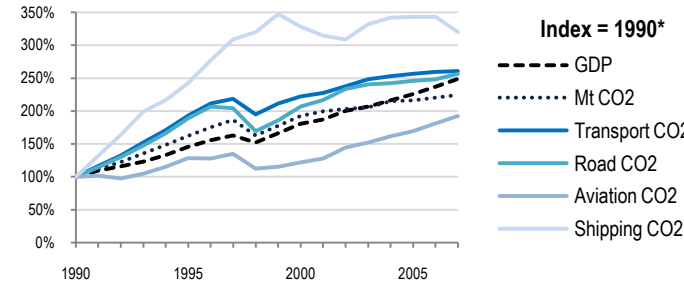
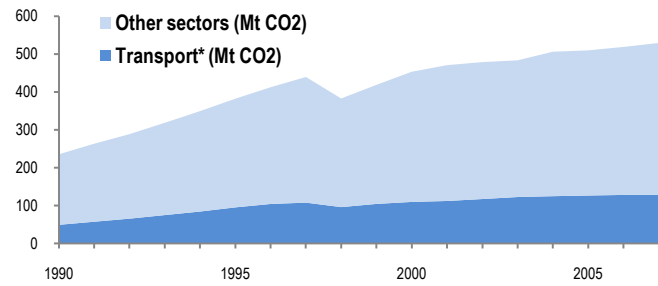
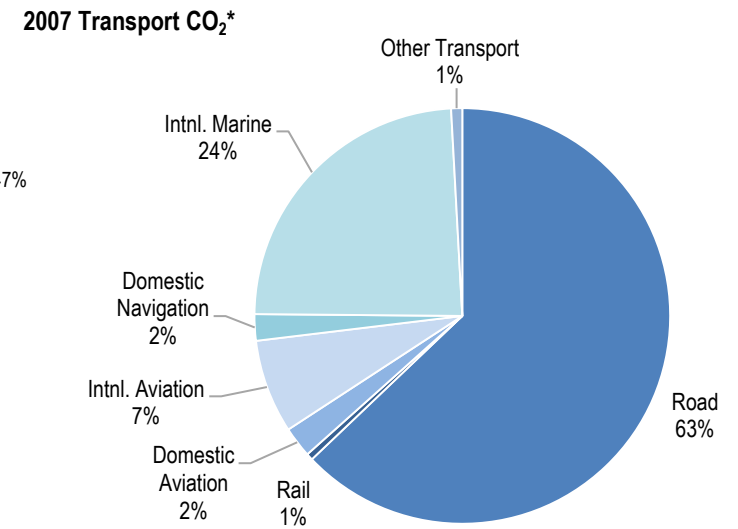
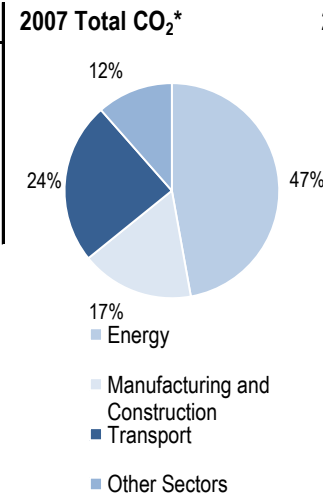
Asia-Pacific

ITF-other

Top 10 non-ITF

529.0 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	125%	529	99%	10.92	-10%	0.50
Transport CO ₂	161%	128.79	131%	2.66	5%	0.12
Road CO ₂	157%	80.98	127%	1.67	3%	0.08
Aviation CO ₂	93%	12.47	71%	0.26	-23%	0.01
Shipping CO ₂	220%	33.55	183%	0.69	29%	0.03



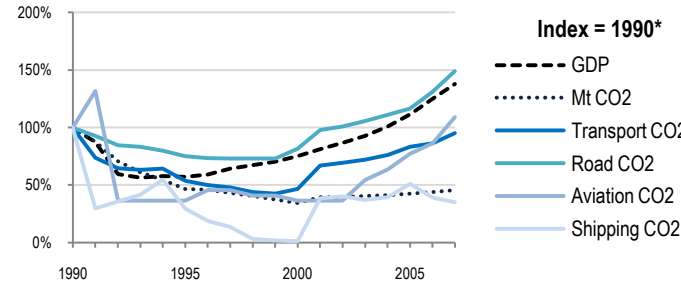
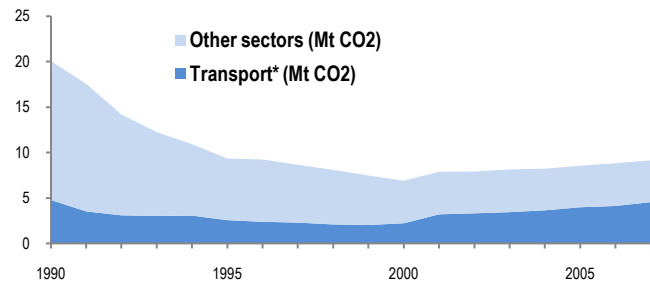
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	42.87	45.09	47.01	47.36	47.62	47.86	48.04	48.14	48.30	48.46	13%	0.72%
GDP PPP (billion 2000 US dollars)	428.27	623.78	772.77	802.41	858.35	884.93	926.78	965.69	1015.26	1065.75	149%	5.51%
Road passenger km (million pkm)	0	0	0	267525	244955	238861	190571	200779	204339	204339	..	..
Road and Rail freight tkm (million tkm)	13663	13838	10803	101367	102778	109430	111698	110977	119562	116149	750%	13.42%
Road pkm/capita	0.00	0.00	0.00	5648.75	5143.95	4990.83	3966.92	4170.73	4230.62	4216.65	..	..
Road and Rail freight tkm/\$ of GDP	0.03	0.02	0.01	0.13	0.12	0.12	0.12	0.11	0.12	0.11	242%	7.49%
Passenger cars per 1000 inhabitants	48	133	172	188	205	215	221	230	240	..	..	10.58%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	235.41	382.05	453.2	470.59	478.6	483.33	506	509.64	518.63	529	125%	4.88%
... of which transport CO ₂ (Mt)*	49.38	95.37	109.8	112.3	117.4	122.69	124.92	126.71	128.25	128.79	161%	5.80%
Transport* as a percentage of total	21.0%	25.0%	24.2%	23.9%	24.5%	25.4%	24.7%	24.9%	24.7%	24.3%		
Road (Mt)	31.56	59.59	65.24	68.51	73.59	75.87	76.52	77.57	78.42	80.98	157%	5.70%
Rail (Mt)	0.88	0.93	0.97	0.97	0.97	1	0.85	0.8	0.73	0.67	-24%	-1.59%
Domestic Aviation (Mt)	5.63	6.26	6.2	6.32	6.59	6.24	6.55	3.69	2.89	3.08	-45%	-3.49%
International Aviation (Mt)	0.84	2.05	1.7	1.96	2.76	3.59	3.92	7.25	8.83	9.39	1018%	15.26%
Domestic Navigation (Mt)	5.21	10.18	14.22	13.15	13.42	13.62	12.56	2.73	2.7	2.65	-49%	-3.90%
International Shipping (Mt)	5.27	15.2	20.21	19.86	18.93	21.14	23.29	33.24	33.3	30.9	486%	10.96%
Other Transport (Mt)	0	1.14	1.25	1.53	1.13	1.22	1.21	1.44	1.37	1.11	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

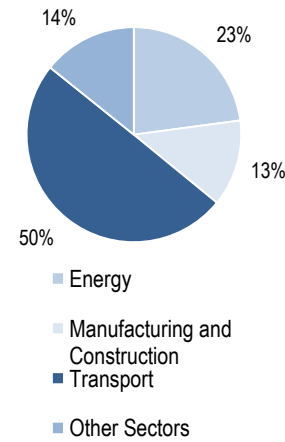
Latvia

EU-27 9.1 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

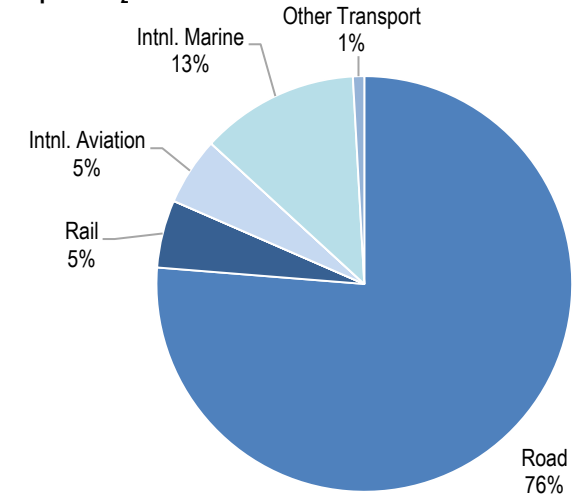
Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-54%	9.14	-47%	4.01	-67%	0.26
Transport CO ₂	-5%	4.55	11%	2.00	-31%	0.13
Road CO ₂	49%	3.47	74%	1.52	8%	0.10
Aviation CO ₂	9%	0.24	28%	0.11	-21%	0.01
Shipping CO ₂	-65%	0.56	-59%	0.25	-74%	0.02



2007 Total CO₂*



2007 Transport CO₂*



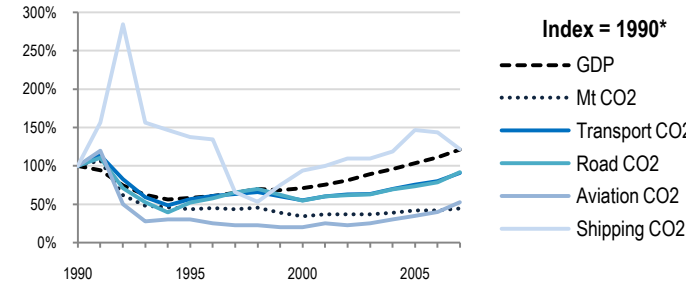
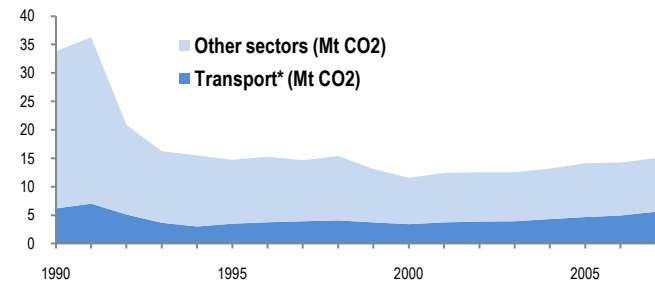
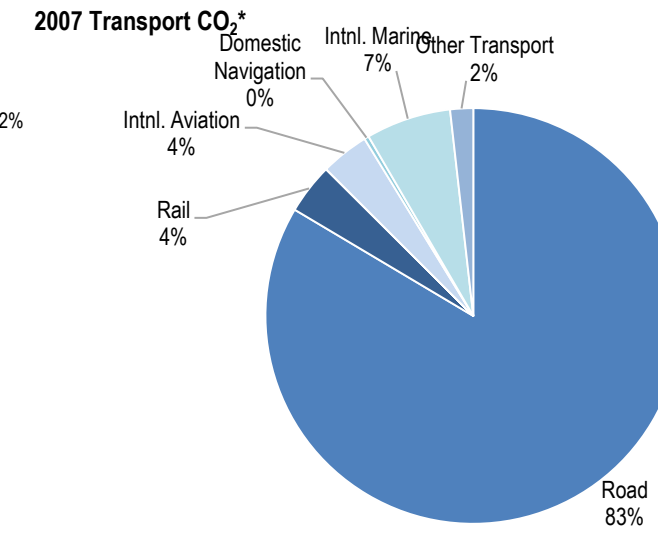
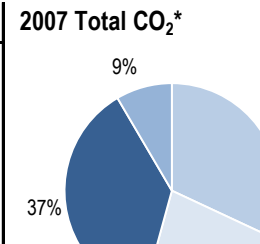
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	2.67	2.52	2.37	2.36	2.34	2.33	2.31	2.30	2.29	2.28	-15%	-0.92%
GDP PPP (billion 2000 US dollars)	25.16	14.36	18.92	20.44	21.76	23.33	25.35	28.04	31.47	34.71	38%	1.91%
Road passenger km (million pkm)	5862	1835	2348	2305	2361	2550	2655	2891	2800	2644	-55%	-4.58%
Road and Rail freight tkm (million tkm)	24391	11591	18098	19539	21180	24718	25927	28326	27768	31455	29%	1.51%
Road pkm/capita	2195.51	728.17	990.72	976.69	1008.97	1094.42	1149.35	1256.96	1222.71	1159.65	-47%	-3.69%
Road and Rail freight tkm/\$ of GDP	0.97	0.81	0.96	0.96	0.97	1.06	1.02	1.01	0.88	0.91	-7%	-0.40%
Passenger cars per 1000 inhabitants	106	132	235	248	265	279	297	323	357	..	..	7.88%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	20.05	9.34	6.9	7.89	7.91	8.15	8.23	8.55	8.83	9.14	-54%	-4.52%
... of which transport CO ₂ (Mt)*	4.79	2.57	2.23	3.21	3.32	3.45	3.65	3.99	4.13	4.55	-5%	-0.30%
Transport* as a percentage of total	23.9%	27.5%	32.3%	40.7%	42.0%	42.3%	44.3%	46.7%	46.8%	49.8%		
Road (Mt)	2.33	1.75	1.9	2.28	2.35	2.46	2.59	2.71	3.05	3.47	49%	2.37%
Rail (Mt)	0.53	0.24	0.2	0.21	0.22	0.25	0.26	0.26	0.22	0.24	-55%	-4.55%
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0.22	0.08	0.08	0.08	0.08	0.12	0.14	0.17	0.19	0.24	9%	0.51%
Domestic Navigation (Mt)	0.11	0	0	0	0	0	0	0	0	0	-100%	-99.98%
International Shipping (Mt)	1.48	0.47	0.02	0.61	0.64	0.59	0.63	0.81	0.62	0.56	-62%	-5.56%
Other Transport (Mt)	0.12	0.04	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	-67%	-6.26%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	28.46	13.14	10.21	11.48	11.51	11.66	11.77	12.26	12.53	12.92	-55%	-4.54%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	20.85	9.91	7.33	8.40	8.42	8.57	8.69	9.01	9.30	9.56	-54%	-4.48%
... of which transport GHG (Mt CO ₂ eq.)*	4.73	2.66	2.33	3.35	3.46	3.59	3.83	4.17	4.30	4.67	-1%	-0.07%
Road (Mt)	2.34	1.77	1.94	2.32	2.39	2.51	2.67	2.78	3.14	3.55	52%	2.48%
International Aviation (Mt)	0.22	0.08	0.08	0.08	0.08	0.12	0.15	0.18	0.20	0.25	11%	0.63%
International Shipping (Mt)	1.56	0.49	0.03	0.66	0.69	0.63	0.67	0.87	0.65	0.59	-62%	-5.53%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Lithuania

EU-27 15.0 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-56%	15.02	-51%	4.44	-63%	0.29
Transport CO ₂	-9%	5.6	-1%	1.66	-25%	0.11
Road CO ₂	-8%	4.67	1%	1.38	-24%	0.09
Aviation CO ₂	-48%	0.21	-43%	0.06	-57%	0.00
Shipping CO ₂	22%	0.39	33%	0.12	1%	0.01



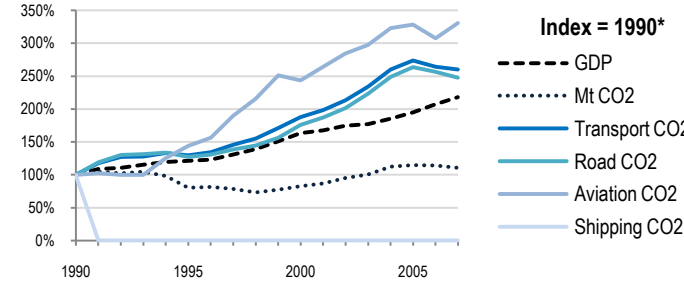
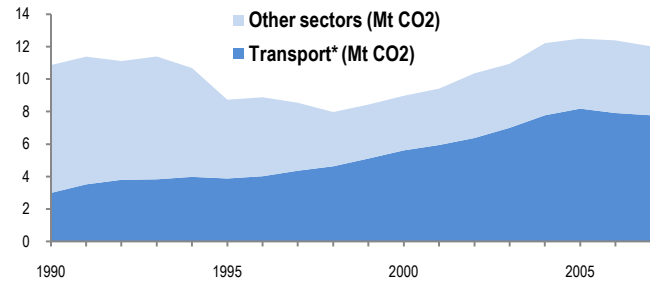
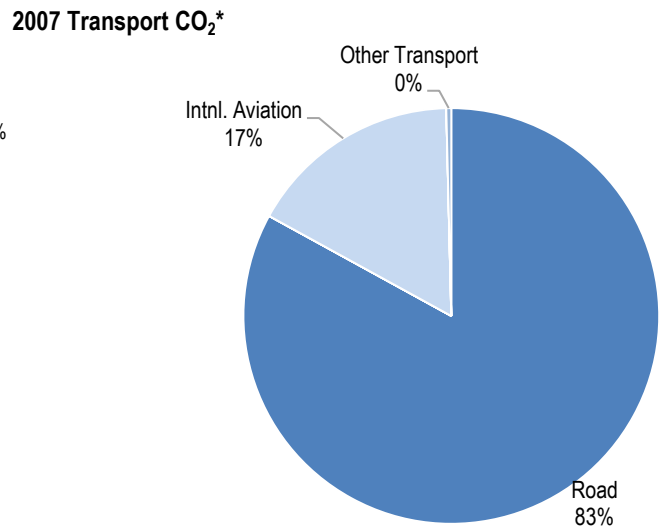
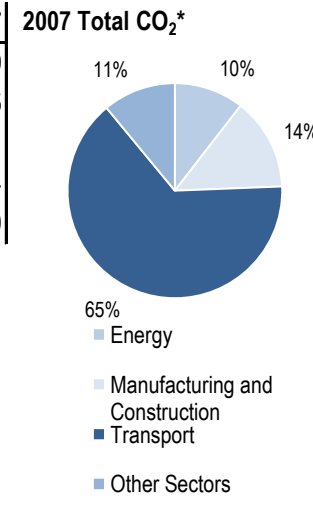
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	3.70	3.63	3.50	3.48	3.47	3.45	3.44	3.41	3.39	3.38	-9%	-0.53%
GDP PPP (billion 2000 US dollars)	43.02	24.95	30.51	32.54	34.79	38.38	41.19	44.46	47.86	52.07	21%	1.13%
Road passenger km (million pkm)	6677	3334	2266	2331	18542	21976	28939	38060	42755	42289	533%	11.47%
Road and Rail freight tkm (million tkm)	26594	12380	16687	16015	20476	22920	23916	28365	31031	34651	30%	1.57%
Road pkm/capita	1804.59	918.46	647.43	669.83	5343.52	6369.86	8412.50	11161.29	12612.09	12511.54	593%	12.06%
Road and Rail freight tkm/\$ of GDP	0.62	0.50	0.55	0.49	0.59	0.60	0.58	0.64	0.65	0.67	8%	0.43%
Passenger cars per 1000 inhabitants	133	198	335	326	340	364	383	426	468	..	..	8.18%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	33.81	14.73	11.57	12.43	12.52	12.54	13.17	14.12	14.25	15.02	-56%	-4.66%
... of which transport CO ₂ (Mt)*	6.17	3.49	3.41	3.72	3.87	3.92	4.3	4.65	4.93	5.6	-9%	-0.57%
Transport* as a percentage of total	18.2%	23.7%	29.5%	29.9%	30.9%	31.3%	32.6%	32.9%	34.6%	37.3%		
Road (Mt)	5.08	2.66	2.77	3.05	3.15	3.19	3.52	3.74	3.99	4.67	-8%	-0.49%
Rail (Mt)	0.35	0.24	0.22	0.19	0.21	0.23	0.22	0.23	0.22	0.22	-37%	-2.69%
Domestic Aviation (Mt)	0	0	0	0.01	0.01	0.01	0.02	0	0	0	..	..
International Aviation (Mt)	0.4	0.12	0.08	0.09	0.08	0.09	0.1	0.14	0.16	0.21	-48%	-3.72%
Domestic Navigation (Mt)	0.02	0	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0%	0.00%
International Shipping (Mt)	0.3	0.44	0.29	0.31	0.34	0.34	0.36	0.45	0.44	0.37	23%	1.24%
Other Transport (Mt)	0.02	0.02	0.03	0.06	0.06	0.06	0.06	0.08	0.1	0.1	400%	9.93%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	49.80	22.38	19.56	20.64	21.03	21.26	22.06	23.14	23.44	25.27	-49%	-3.91%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	34.01	14.62	11.23	11.96	12.07	12.09	12.79	13.59	13.70	13.80	-59%	-5.17%
... of which transport GHG (Mt CO ₂ eq.)*	6.52	3.69	3.55	3.85	3.98	4.04	4.42	4.77	4.99	5.72	-12%	-0.77%
Road (Mt)	5.41	2.94	2.94	3.23	3.33	3.38	3.71	3.94	4.18	4.92	-9%	-0.55%
International Aviation (Mt)	0.42	0.13	0.08	0.10	0.09	0.10	0.11	0.14	0.16	0.20	-51%	-4.16%
International Shipping (Mt)	0.31	0.46	0.30	0.31	0.33	0.32	0.35	0.43	0.40	0.33	8%	0.46%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Luxembourg

EU-27 12.0 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	11%	12.02	-12%	25.04	-49%	0.39
Transport CO ₂	160%	7.77	106%	16.19	19%	0.25
Road CO ₂	148%	6.44	96%	13.42	14%	0.21
Aviation CO ₂	231%	1.29	162%	2.69	52%	0.04
Shipping CO ₂	..	0	..	0.00	..	0.00



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	0.38	0.41	0.44	0.44	0.45	0.45	0.46	0.47	0.47	0.48	26%	1.38%
GDP PPP (billion 2000 US dollars)	14.30	17.36	23.38	23.97	24.95	25.34	26.49	27.86	29.66	31.20	118%	4.70%
Road passenger km (million pkm)	0	0	0	0	0	0	0	0	0	0	..	..
Road and Rail freight tkm (million tkm)	1092	1059	1081	1119	1204	1127	1139	925	1029	874	-20%	-1.30%
Road pkm/capita	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..
Road and Rail freight tkm/\$ of GDP	0.08	0.06	0.05	0.05	0.05	0.04	0.04	0.03	0.03	0.03	-63%	-5.73%
Passenger cars per 1000 inhabitants	480	559	602	621	633	638	647	..	..	..	..	2.16%
CO₂ Emissions												
IEA CO ₂ from fuel combustion (Mt)*	10.86	8.73	8.97	9.41	10.35	10.94	12.21	12.49	12.38	12.02	11%	0.60%
... of which transport CO ₂ (Mt)*	2.99	3.88	5.61	5.94	6.37	7	7.77	8.18	7.91	7.77	160%	5.78%
Transport* as a percentage of total	27.5%	44.4%	62.5%	63.1%	61.5%	64.0%	63.6%	65.5%	63.9%	64.6%		
Road (Mt)	2.6	3.31	4.58	4.87	5.23	5.81	6.47	6.86	6.67	6.44	148%	5.48%
Rail (Mt)	0	0.01	0.02	0.01	0.01	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0.39	0.56	0.95	1.03	1.11	1.16	1.26	1.28	1.2	1.29	231%	7.29%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0	0	0.05	0.03	0.02	0.02	0.03	0.03	0.04	0.03	..	-7.04%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	13.52	10.97	10.96	11.35	12.49	12.98	14.60	14.72	14.55	14.25	5%	0.31%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	11.03	9.10	9.31	9.78	10.91	11.49	13.01	13.16	12.94	12.63	15%	0.80%
... of which transport GHG (Mt CO ₂ eq.)*	3.17	4.10	5.83	6.20	6.64	7.26	8.23	8.47	8.21	8.02	153%	5.62%
Road (Mt)	2.73	3.49	4.81	5.11	5.46	6.03	6.90	7.13	6.95	6.68	144%	5.39%
International Aviation (Mt)	0.41	0.58	0.99	1.07	1.16	1.20	1.31	1.33	1.25	1.34	230%	7.28%
International Shipping (Mt)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83%	3.62%

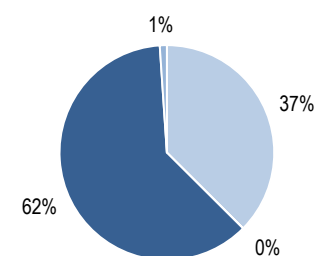
* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Malta

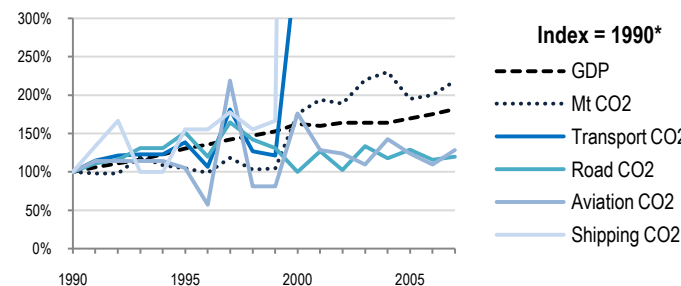
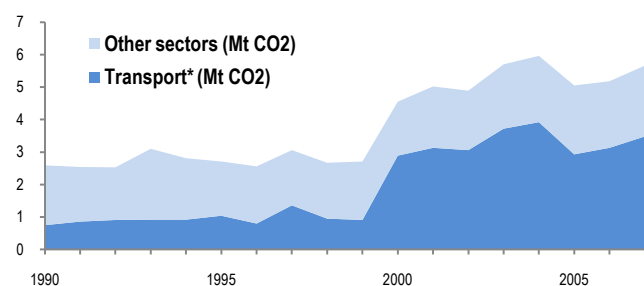
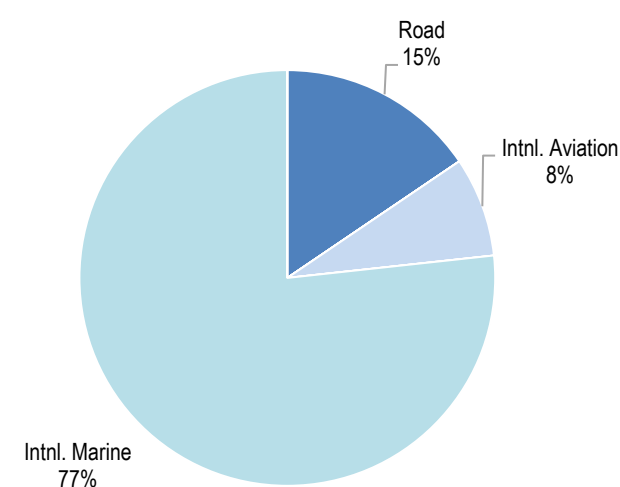
EU-27 5.7 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	119%	5.66	92%	13.80	20%	0.73
Transport CO ₂	364%	3.48	307%	8.49	155%	0.45
Road CO ₂	20%	0.54	5%	1.32	-34%	0.07
Aviation CO ₂	29%	0.27	13%	0.66	-29%	0.03
Shipping CO ₂	2867%	2.67	2505%	6.51	1533%	0.35

2007 Total CO₂*



2007 Transport CO₂*



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	0.36	0.38	0.39	0.39	0.40	0.40	0.40	0.40	0.41	0.41	14%	0.77%
GDP PPP (billion 2000 US dollars)	4.25	5.54	6.91	6.80	6.98	6.96	6.97	7.20	7.44	7.72	82%	3.57%
Road passenger km (million pkm)	0	0	0	0	0	0	0	0	0	0	..	..
Road and Rail freight tkm (million tkm)	0	0	0	0	0	0	0	0	0	0	..	..
Road pkm/capita	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..
Road and Rail freight tkm/\$ of GDP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..
Passenger cars per 1000 inhabitants	..	390	485	491	505	520	523	..	..	..	..	3.31%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	2.59	2.71	4.55	5.02	4.89	5.7	5.96	5.05	5.18	5.66	119%	4.71%
... of which transport CO ₂ (Mt)*	0.75	1.04	2.89	3.13	3.06	3.72	3.92	2.93	3.13	3.48	364%	9.45%
Transport* as a percentage of total	29.0%	38.4%	63.5%	62.4%	62.6%	65.3%	65.8%	58.0%	60.4%	61.5%	..	..
Road (Mt)	0.45	0.68	0.45	0.57	0.46	0.6	0.53	0.58	0.52	0.54	20%	1.08%
Rail (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0.21	0.22	0.37	0.27	0.26	0.23	0.3	0.26	0.23	0.27	29%	1.49%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0.09	0.14	2.07	2.29	2.34	2.89	3.09	2.09	2.38	2.67	2867%	22.07%
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Mexico

EU-27

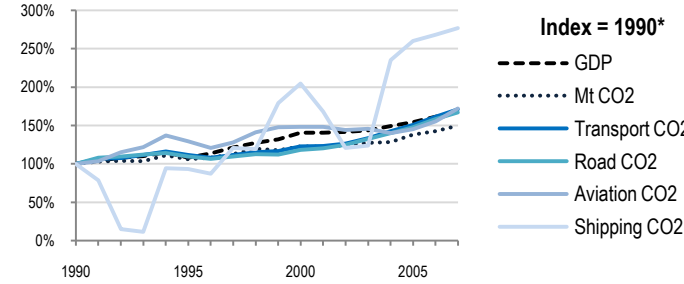
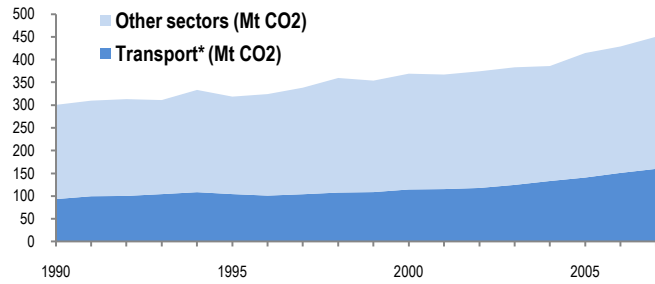
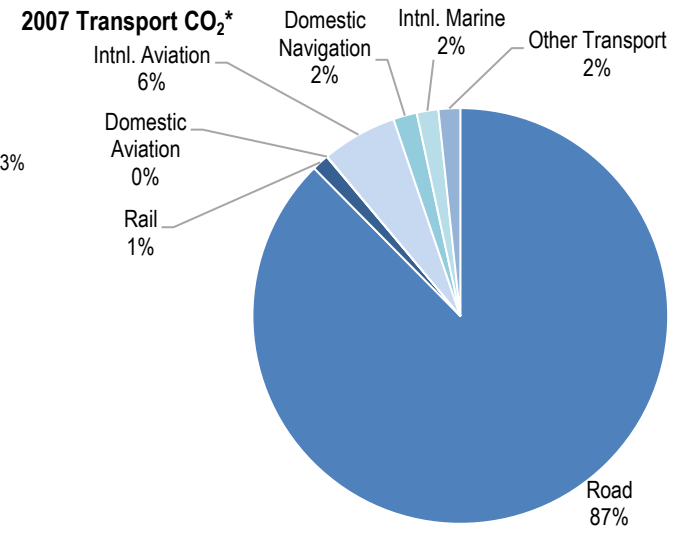
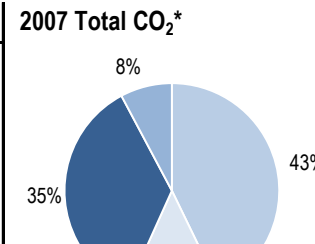
N. America

Asia-Pacific

ITF-other

Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	450.0	449.98	15%	4.26	-10%	0.38
Transport CO ₂		159.67	32%	1.51	3%	0.14
Road CO ₂		139.84	28%	1.32	0%	0.12
Aviation CO ₂		9.43	32%	0.09	3%	0.01
Shipping CO ₂		5.62	113%	0.05	66%	0.00



Transport and the Economy

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	81.25	91.12	98.26	99.56	100.76	101.87	102.87	103.83	104.75	105.68	30%	1.56%
GDP PPP (billion 2000 US dollars)	700.73	755.96	985.90	985.57	993.18	1006.99	1047.39	1080.91	1132.95	1169.19	67%	3.06%
Road passenger km (million pkm)	271512	383097	381700	389329	393200	399000	410000	422915	436999	449917	66%	3.02%
Road and Rail freight tkm (million tkm)	145301	200440	242386	238516	244516	249332	254187	276402	283118	299560	106%	4.35%
Road pkm/capita	3341.69	4204.31	3884.59	3910.50	3902.34	3916.76	3985.61	4073.15	4171.83	4257.35	27%	1.43%
Road and Rail freight tkm/\$ of GDP	0.21	0.27	0.25	0.24	0.25	0.25	0.24	0.26	0.25	0.26	24%	1.25%
Passenger cars per 1000 inhabitants	82	94	107	..	128	137	131	137	147	..	..	3.72%

CO2 Emissions

IEA CO ₂ from fuel combustion (Mt)*	300.45	318.55	368.99	367.11	374.2	382.98	385.82	414.4	428.82	449.98	50%	2.40%
... of which transport CO ₂ (Mt)*	93.35	104.28	114.42	115.32	117.75	124.53	133.06	140.7	150.92	159.67	71%	3.21%
<i>Transport* as a percentage of total</i>	31.1%	32.7%	31.0%	31.4%	31.5%	32.5%	34.5%	34.0%	35.2%	35.5%		
Road (Mt)	83.81	92.02	98.99	100.82	104.44	111.06	117.49	123.95	132.67	139.84	67%	3.06%
Rail (Mt)	2.02	1.75	1.66	1.57	1.61	1.66	1.78	1.86	1.99	2.09	3%	0.20%
Domestic Aviation (Mt)	0	0	0.06	0.05	0.05	0.05	0.05	0.06	0.06	0.06	..	..
International Aviation (Mt)	5.48	7.1	8.07	8.08	7.86	7.93	7.62	7.89	8.45	9.37	71%	3.21%
Domestic Navigation (Mt)	0	0	0	0	0	0	2.39	2.58	2.74	2.93	..	..
International Shipping (Mt)	2.03	1.89	4.16	3.41	2.45	2.51	2.38	2.7	2.71	2.69	33%	1.67%
Other Transport (Mt)	0	1.53	1.48	1.4	1.33	1.32	1.37	1.66	2.3	2.69	..	..

GHG Emissions

UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

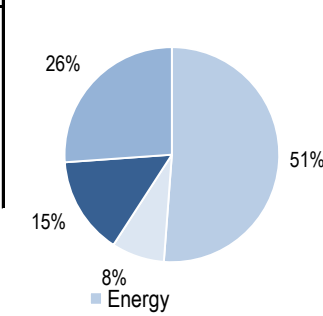
Republic of Moldova

EU-27 N. America Asia-Pacific ITF-other Top 10 non-ITF

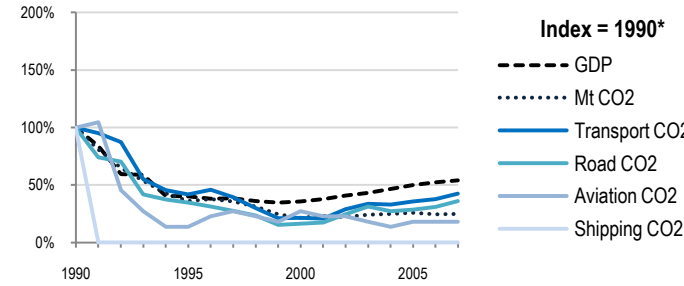
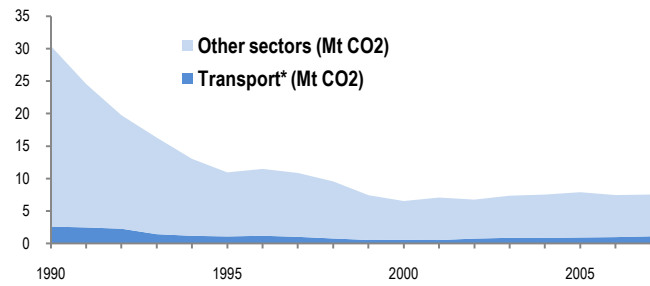
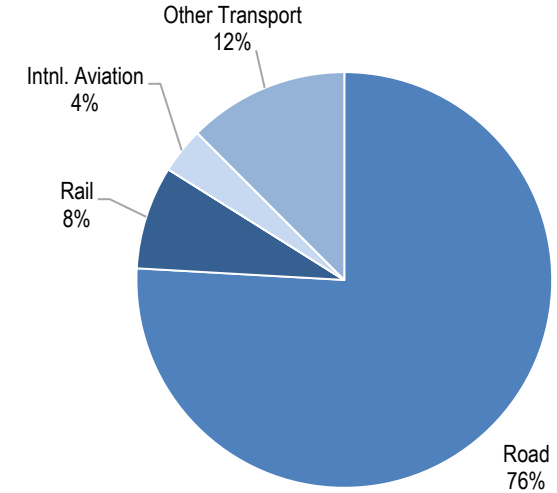
Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-75%	7.54	-71%	1.99	-54%	0.88
Transport CO ₂	-57%	1.11	-51%	0.29	-21%	0.13
Road CO ₂	-64%	0.85	-58%	0.22	-33%	0.10
Aviation CO ₂	-82%	0.04	-79%	0.01	-66%	0.00
Shipping CO ₂	..	0	..	0.00	..	0.00

7.5 Mt

2007 Total CO₂*



2007 Transport CO₂*



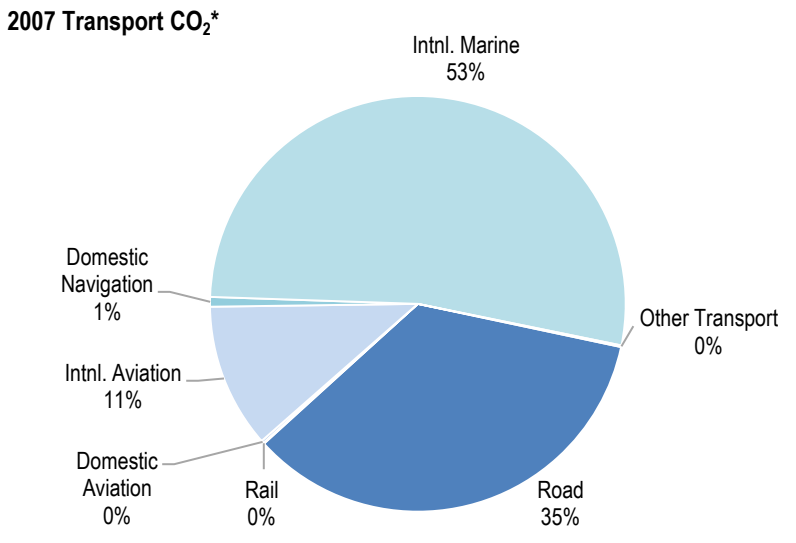
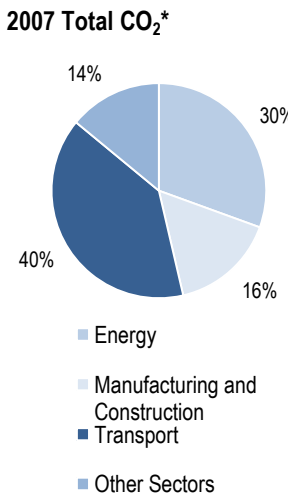
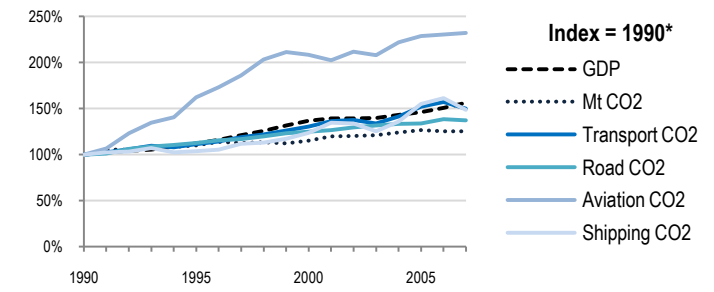
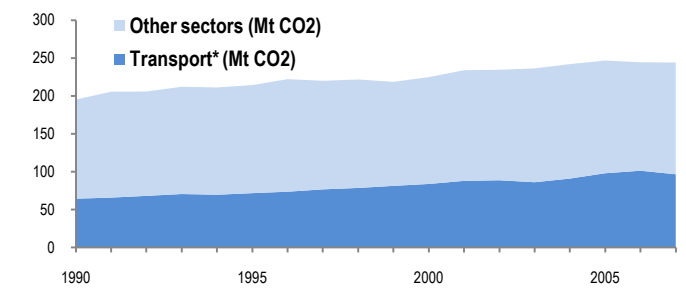
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	4.39	4.38	4.15	4.09	4.03	3.98	3.93	3.88	3.83	3.79	-14%	-0.86%
GDP PPP (billion 2000 US dollars)	15.86	6.36	5.65	5.99	6.46	6.88	7.39	7.95	8.33	8.58	-46%	-3.55%
Road passenger km (million pkm)	4878	1163	1021	1069	1298	1640	1949	2059	2206	2475	-49%	-3.91%
Road and Rail freight tkm (million tkm)	21088	4125	2539	3013	3867	4459	5129	5385	6223	5835	-72%	-7.28%
Road pkm/capita	1111.16	265.53	246.02	261.37	322.08	412.06	495.93	530.67	575.98	653.03	-41%	-3.08%
Road and Rail freight tkm/\$ of GDP	1.33	0.65	0.45	0.50	0.60	0.65	0.69	0.68	0.75	0.68	-49%	-3.87%
Passenger cars per 1000 inhabitants	48	38	54	..	63	60	65	70	84	..	..	3.56%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	30.4	10.95	6.54	7.08	6.76	7.36	7.54	7.9	7.46	7.54	-75%	-7.87%
... of which transport CO ₂ (Mt)*	2.61	1.09	0.56	0.54	0.76	0.88	0.86	0.93	0.99	1.11	-57%	-4.90%
Transport* as a percentage of total	8.6%	10.0%	8.6%	7.6%	11.2%	12.0%	11.4%	11.8%	13.3%	14.7%	..	..
Road (Mt)	2.35	0.82	0.39	0.41	0.58	0.74	0.64	0.67	0.73	0.85	-64%	..
Rail (Mt)	0	0.09	0.03	0.03	0.07	0.04	0.05	0.07	0.09	0.09	..	0.00%
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0.22	0.03	0.06	0.05	0.05	0.04	0.03	0.04	0.04	0.04	-82%	-9.54%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0.04	0.15	0.08	0.04	0.06	0.07	0.14	0.15	0.14	0.14	250%	7.65%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Netherlands



Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	25%	243.99	14%	14.90	-20%	0.46
Transport CO ₂	50%	96.67	37%	5.90	-4%	0.18
Road CO ₂	37%	33.76	25%	2.06	-12%	0.06
Aviation CO ₂	132%	11.05	112%	0.67	49%	0.02
Shipping CO ₂	48%	51.65	35%	3.15	-5%	0.10



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	14.95	15.46	15.92	16.04	16.15	16.22	16.28	16.32	16.34	16.38	10%	0.54%
GDP PPP (billion 2000 US dollars)	342.42	383.53	467.65	476.66	477.02	478.62	489.33	499.34	516.20	534.06	56%	2.65%
Road passenger km (million pkm)	150400	145600	156553	157083	159627	161700	167549	164834	163630	164905	10%	0.54%
Road and Rail freight tkm (million tkm)	25961	30103	36082	35324	34411	37162	40224	39868	39706	40083	54%	2.59%
Road pkm/capita	10060.20	9417.85	9833.73	9793.20	9884.02	9969.17	10291.71	10100.12	10014.08	10067.46	0%	0.00%
Road and Rail freight tkm/\$ of GDP	0.08	0.08	0.08	0.07	0.07	0.08	0.08	0.08	0.08	0.08	-1%	-0.06%
Passenger cars per 1000 inhabitants	368	361	383	..	424	..	429	..	..	..	..	1.10%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	195.17	214.3	224.72	233.87	234.47	236.28	241.91	246.62	244.37	243.99	25%	1.32%
... of which transport CO ₂ (Mt)*	64.45	71.76	83.85	87.93	88.74	86.15	90.95	98.01	101.29	96.67	50%	2.41%
Transport* as a percentage of total	33.0%	33.5%	37.3%	37.6%	37.8%	36.5%	37.6%	39.7%	41.4%	39.6%		
Road (Mt)	24.64	27.69	30.71	31.21	31.88	32.45	32.86	32.94	34.06	33.76	37%	1.87%
Rail (Mt)	0.12	0.13	0.13	0.13	0.13	0.12	0.14	0.1	0.09	0.09	-25%	-1.68%
Domestic Aviation (Mt)	0.47	0.33	0.27	0.19	0.21	0.19	0.18	0.22	0.16	0.18	-62%	-5.49%
International Aviation (Mt)	4.29	7.38	9.65	9.45	9.86	9.7	10.38	10.67	10.81	10.87	153%	5.62%
Domestic Navigation (Mt)	0.53	0.52	1	0.97	0.92	0.86	0.87	0.63	0.82	0.73	38%	1.90%
International Shipping (Mt)	34.29	35.59	41.98	45.88	45.62	42.72	46.39	53.31	55.26	50.92	48%	2.35%
Other Transport (Mt)	0.1	0.11	0.1	0.11	0.12	0.11	0.12	0.15	0.1	0.12	20%	1.08%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	251.01	267.77	267.02	272.61	272.06	270.00	275.81	277.40	275.91	270.17	8%	0.43%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	190.24	206.39	215.70	226.01	225.53	226.07	231.79	234.08	233.04	228.47	20%	1.08%
... of which transport GHG (Mt CO ₂ eq.)*	65.45	72.87	85.54	90.15	90.73	88.10	92.93	100.39	103.45	98.36	50%	2.42%
Road (Mt)	25.90	29.19	32.19	32.70	33.38	33.95	34.35	34.40	35.30	34.94	35%	1.78%
International Aviation (Mt)	4.56	7.61	9.78	9.57	10.02	9.85	10.53	10.91	11.01	11.14	144%	5.40%
International Shipping (Mt)	34.46	35.50	42.81	47.13	46.56	43.43	47.23	54.30	56.39	51.53	50%	2.40%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

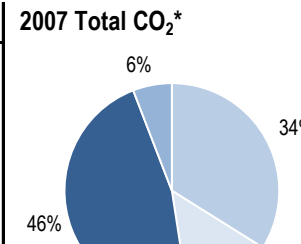
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New Zealand

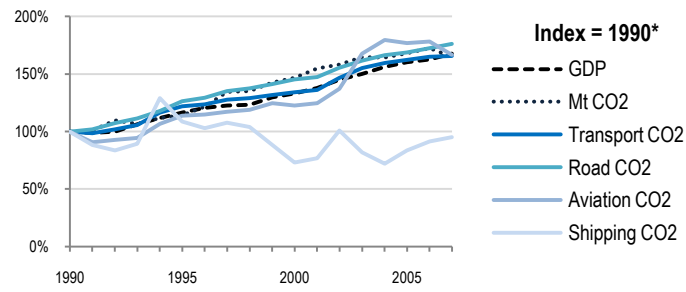
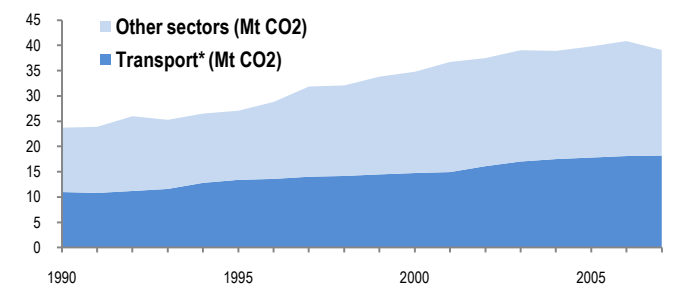
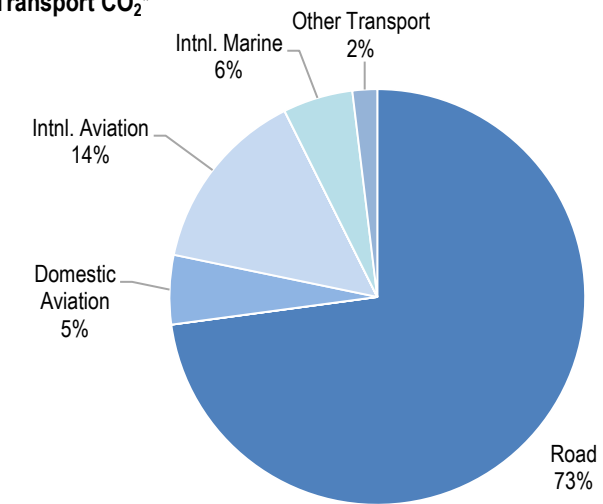
EU-27 N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	65%	39.08	32%	9.33	-2%	0.39
Transport CO ₂	66%	18.2	33%	4.34	-1%	0.18
Road CO ₂	76%	13.27	41%	3.17	5%	0.13
Aviation CO ₂	67%	3.6	34%	0.86	-1%	0.04
Shipping CO ₂	-5%	0.99	-24%	0.24	-43%	0.01

39.1 Mt



2007 Transport CO₂*



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Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	3.36	3.68	3.86	3.89	3.94	4.01	4.06	4.10	4.14	4.19	25%	1.31%
GDP PPP (billion 2000 US dollars)	60.32	70.30	80.17	83.19	87.39	90.46	94.11	96.64	98.15	101.07	68%	3.08%
Road passenger km (million pkm)	0	0	0	0	0	0	0	0	0	0	..	..
Road and Rail freight tkm (million tkm)	0	11205	18423	19166	19976	20950	22048	22231	22363	23086	..	6.21%
Road pkm/capita	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..
Road and Rail freight tkm/\$ of GDP	0.00	0.16	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	..	3.04%
Passenger cars per 1000 inhabitants	436	451	576	..	613	574	591	607	609	..	..	2.11%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	23.71	27.06	34.77	36.71	37.47	39.04	38.91	39.79	40.85	39.08	65%	2.98%
... of which transport CO ₂ (Mt)*	10.98	13.39	14.74	14.93	16.09	17.02	17.5	17.8	18.1	18.2	66%	3.02%
Transport* as a percentage of total	46.3%	49.5%	42.4%	40.7%	42.9%	43.6%	45.0%	44.7%	44.3%	46.6%		
Road (Mt)	7.54	9.53	10.96	11.11	11.72	12.18	12.54	12.71	12.99	13.27	76%	3.38%
Rail (Mt)	0	0.01	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0.81	0.88	0.91	0.89	1.09	1.22	1.26	1.17	1.2	0.98	21%	1.13%
International Aviation (Mt)	1.35	1.58	1.74	1.8	1.87	2.4	2.62	2.65	2.65	2.62	94%	3.98%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	1.04	1.13	0.76	0.8	1.05	0.85	0.75	0.87	0.95	0.99	-5%	-0.29%
Other Transport (Mt)	0.24	0.26	0.37	0.33	0.36	0.37	0.33	0.39	0.32	0.35	46%	2.24%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	64.24	67.19	73.10	75.75	76.39	79.28	78.42	80.82	81.23	79.17	23%	1.24%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	24.61	26.51	30.11	32.02	32.45	34.38	33.56	35.42	35.77	34.52	40%	2.01%
... of which transport GHG (Mt CO ₂ eq.)*	11.15	13.75	14.95	15.45	16.34	17.30	17.74	18.18	18.38	18.50	66%	3.02%
Road (Mt)	7.65	9.68	11.03	11.17	11.80	12.28	12.63	12.85	13.13	13.48	76%	3.39%
International Aviation (Mt)	1.35	1.59	1.75	1.82	1.88	2.42	2.64	2.65	2.67	2.64	95%	4.01%
International Shipping (Mt)	1.04	1.14	0.75	0.82	1.06	0.86	0.74	0.99	0.97	0.99	-5%	-0.30%

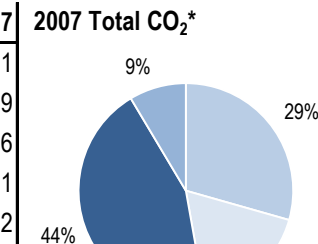
* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Norway

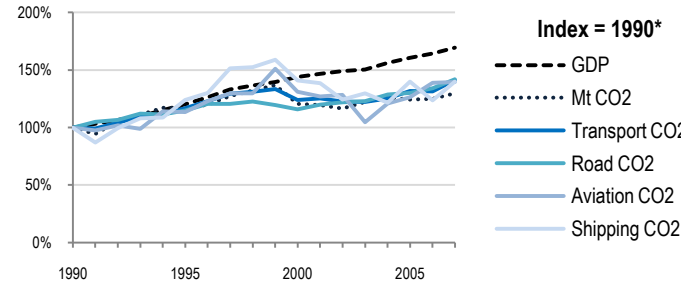
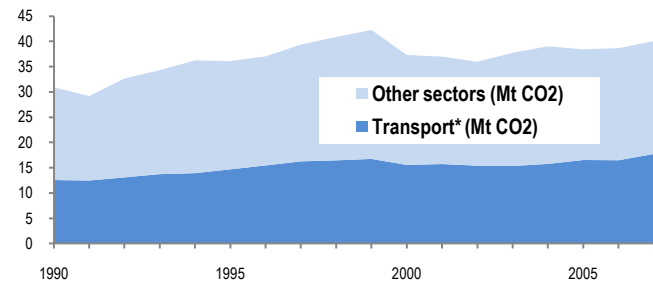
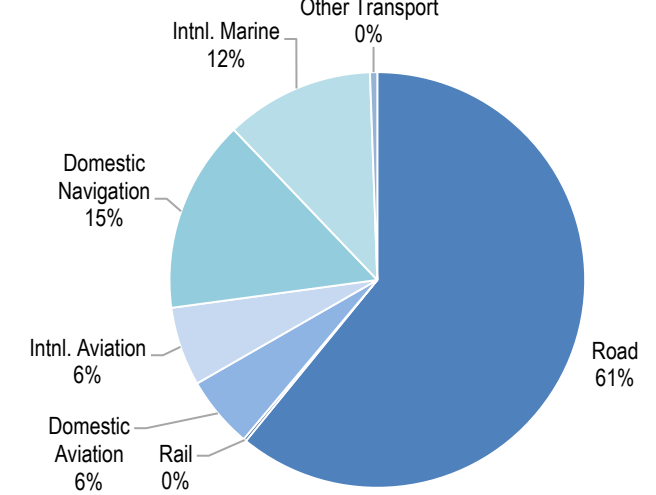
EU-27 N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	30%	40.07	17%	8.51	-23%	0.21
Transport CO ₂	41%	17.72	27%	3.76	-17%	0.09
Road CO ₂	42%	10.79	28%	2.29	-16%	0.06
Aviation CO ₂	40%	2.08	26%	0.44	-18%	0.01
Shipping CO ₂	40%	4.71	26%	1.00	-17%	0.02

40.1 Mt



2007 Transport CO₂*



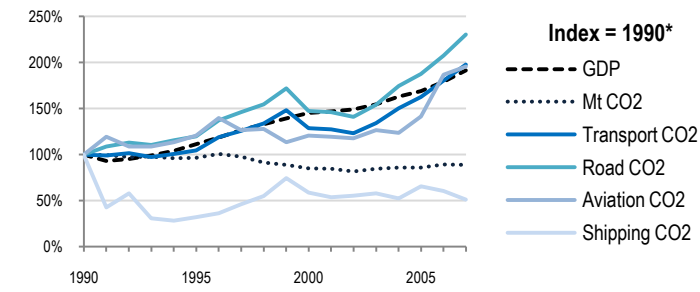
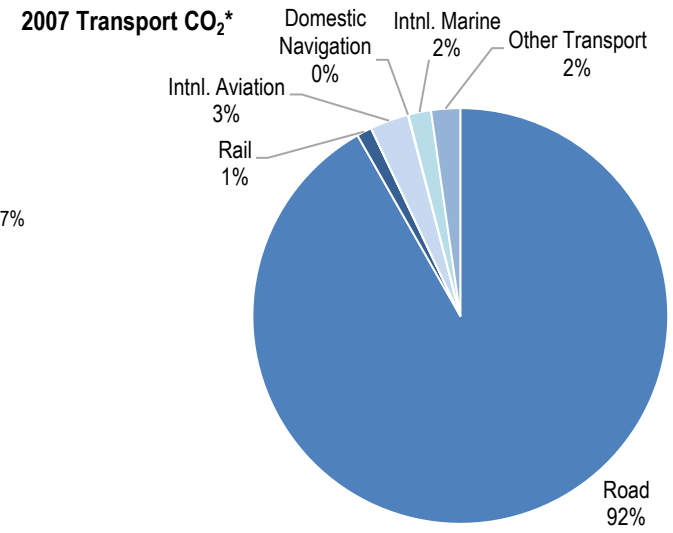
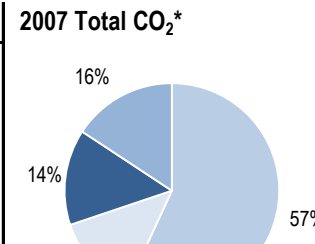
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	4.24	4.36	4.49	4.51	4.54	4.57	4.59	4.62	4.66	4.71	11%	0.62%
GDP PPP (billion 2000 US dollars)	112.63	135.25	162.05	165.28	167.76	169.46	176.01	180.83	184.95	190.75	69%	3.15%
Road passenger km (million pkm)	47327	48482	53091	54162	55517	56344	56645	57327	57661	59207	25%	1.33%
Road and Rail freight tkm (million tkm)	9864	11301	14792	15220	15300	15672	16983	18079	18488	18767	90%	3.86%
Road pkm/capita	11162.03	11119.72	11824.28	12009.31	12228.41	12329.10	12340.96	12408.44	12373.61	12570.49	13%	0.70%
Road and Rail freight tkm/\$ of GDP	0.09	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	12%	0.69%
Passenger cars per 1000 inhabitants	380	386	412	415	419	422	431	439	..	..	..	0.97%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	30.92	36.09	37.3	36.98	35.96	37.74	39.01	38.43	38.65	40.07	30%	1.54%
... of which transport CO ₂ (Mt)*	12.56	14.68	15.55	15.73	15.4	15.34	15.75	16.53	16.48	17.72	41%	2.05%
Transport* as a percentage of total	40.6%	40.7%	41.7%	42.5%	42.8%	40.6%	40.4%	43.0%	42.6%	44.2%	..	..
Road (Mt)	7.6	8.73	8.79	9.11	9.25	9.35	9.77	9.87	10.18	10.79	42%	2.08%
Rail (Mt)	0.1	0.1	0.05	0.05	0.03	0.04	0.05	0.04	0.04	0.04	-60%	-5.25%
Domestic Aviation (Mt)	0.25	0.6	0.9	0.82	0.73	0.94	1.08	1.08	0.96	0.99	296%	8.43%
International Aviation (Mt)	1.24	1.09	1.05	1.07	1.18	0.62	0.72	0.8	1.11	1.09	-12%	-0.76%
Domestic Navigation (Mt)	1.98	1.98	2.19	2.15	2.12	2.62	2.5	2.55	2.6	2.66	34%	1.75%
International Shipping (Mt)	1.39	2.19	2.56	2.52	2.07	1.75	1.6	2.16	1.56	2.05	47%	2.31%
Other Transport (Mt)	0	0	0.01	0.01	0.01	0.02	0.03	0.03	0.03	0.1	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	57.98	58.46	66.11	66.48	63.59	64.36	66.10	67.96	69.56	70.93	22%	1.19%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	34.78	37.76	43.87	45.13	43.68	45.08	46.24	48.65	51.44	51.53	48%	2.34%
... of which transport GHG (Mt CO ₂ eq.)*	19.61	21.12	26.11	25.53	23.80	24.18	25.67	28.65	31.12	31.80	62%	2.89%
Road (Mt)	7.74	8.23	8.54	9.06	9.16	9.31	9.62	9.79	10.09	10.32	33%	1.71%
International Aviation (Mt)	6.79	6.47	10.12	9.27	8.20	8.29	9.39	11.98	13.80	13.84	104%	4.28%
International Shipping (Mt)	1.49	2.28	2.63	2.62	2.09	2.08	1.99	2.28	2.29	2.04	37%	1.86%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

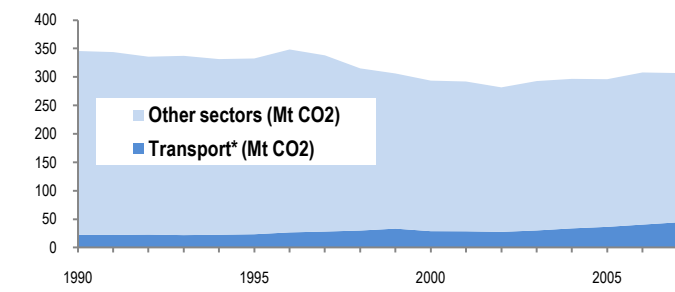
Poland

EU-27 306.1 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-11%	306.8	-11%	8.05	-54%	0.58
Transport CO ₂	98%	44.31	97%	1.16	3%	0.08
Road CO ₂	130%	40.67	130%	1.07	20%	0.08
Aviation CO ₂	96%	1.33	95%	0.03	2%	0.00
Shipping CO ₂	-49%	0.8	-49%	0.02	-73%	0.00



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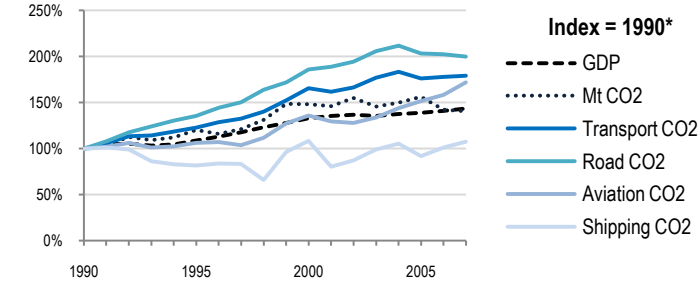
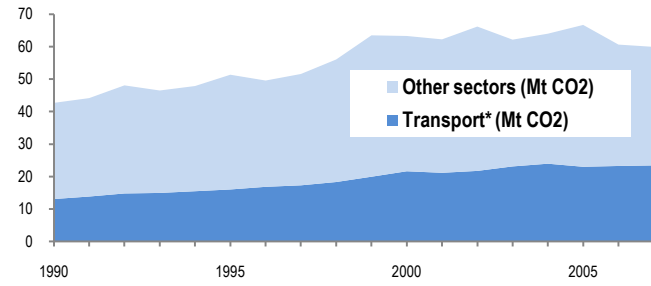
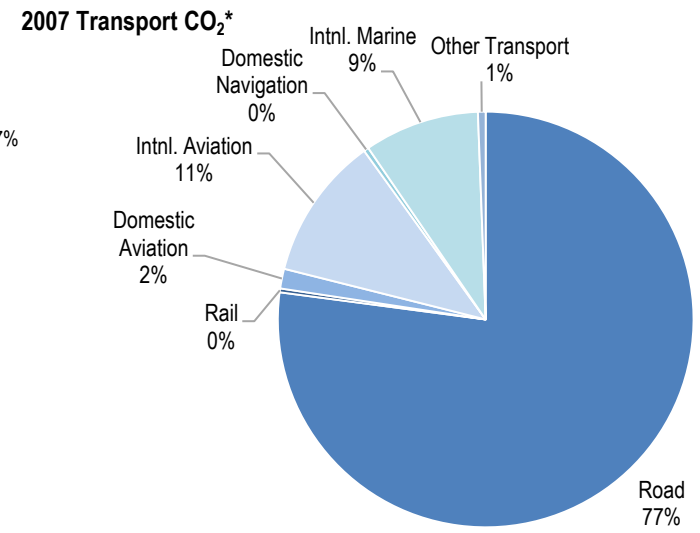
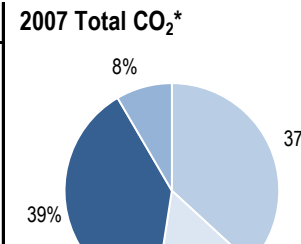
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	38.03	38.28	38.26	38.25	38.23	38.20	38.18	38.16	38.13	38.12	0%	0.01%
GDP PPP (billion 2000 US dollars)	278.59	310.23	403.78	408.65	414.55	430.58	453.59	470.00	499.27	532.45	91%	3.88%
Road passenger km (million pkm)	114400	144724	181435	188696	196695	202396	211618	226614	247388	266619	133%	5.10%
Road and Rail freight tkm (million tkm)	123823	119406	129038	124884	128065	135562	162797	169712	190113	213780	73%	3.26%
Road pkm/capita	3008.15	3780.67	4742.16	4933.23	5145.04	5298.32	5542.64	5938.52	6488.01	6994.20	133%	5.09%
Road and Rail freight tkm/\$ of GDP	0.44	0.38	0.32	0.31	0.31	0.31	0.36	0.36	0.38	0.40	-10%	-0.60%
Passenger cars per 1000 inhabitants	138	195	259	..	288	294	314	323	351	..	..	6.01%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	345.65	332.53	293.56	292.02	281.67	292.75	296.64	296.02	307.88	306.8	-11%	-0.70%
... of which transport CO ₂ (Mt)*	22.41	23.39	28.79	28.58	27.56	30.05	33.71	36.41	40.39	44.31	98%	4.09%
Transport* as a percentage of total	6.5%	7.0%	9.8%	9.8%	9.8%	10.3%	11.4%	12.3%	13.1%	14.4%		
Road (Mt)	17.66	21.15	26.01	25.81	24.92	27.17	30.82	33.08	36.66	40.67	130%	5.03%
Rail (Mt)	2.43	0.86	0.52	0.5	0.48	0.5	0.5	0.49	0.45	0.52	-79%	-8.67%
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0.68	0.82	0.82	0.81	0.8	0.86	0.84	0.96	1.27	1.33	96%	4.03%
Domestic Navigation (Mt)	0.33	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	-94%	-15.20%
International Shipping (Mt)	1.24	0.44	0.9	0.82	0.85	0.89	0.8	1.01	0.93	0.78	-37%	-2.69%
Other Transport (Mt)	0.06	0.06	0.52	0.63	0.5	0.6	0.73	0.85	1.06	1	1567%	18.00%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	461.42	448.13	391.01	386.68	373.61	385.56	385.63	388.58	401.49	400.99	-13%	-0.82%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	353.68	354.04	309.02	308.17	297.73	306.81	306.47	303.24	312.97	310.16	-12%	-0.77%
... of which transport GHG (Mt CO ₂ eq.)*	27.33	30.76	35.24	34.23	34.14	34.64	36.45	38.50	40.83	40.91	50%	2.40%
Road (Mt)	21.62	26.88	31.84	31.03	30.73	31.49	33.50	35.29	37.41	37.51	74%	3.30%
International Aviation (Mt)	0.58	1.09	1.09	1.02	1.25	0.84	0.83	0.94	1.25	1.31	126%	4.92%
International Shipping (Mt)	1.37	0.61	0.92	0.84	0.87	0.91	0.81	1.03	0.95	0.80	-41%	-3.10%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Portugal

EU-27 60.0 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	40%	59.91	32%	5.65	-2%	0.32
Transport CO ₂	79%	23.43	69%	2.21	25%	0.12
Road CO ₂	100%	18.07	88%	1.70	39%	0.10
Aviation CO ₂	72%	2.97	62%	0.28	20%	0.02
Shipping CO ₂	7%	2.19	1%	0.21	-25%	0.01



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	10.00	10.03	10.23	10.29	10.37	10.44	10.50	10.55	10.58	10.61	6%	0.35%
GDP PPP (billion 2000 US dollars)	131.30	142.87	174.52	178.04	179.39	177.95	180.65	182.29	184.78	188.34	43%	2.14%
Road passenger km (million pkm)	50800	74490	94204	95009	95580	96541	97809	97518	97202	97722	92%	3.92%
Road and Rail freight tkm (million tkm)	12510	13138	17135	19312	17833	16713	19727	19847	20120	20960	68%	3.08%
Road pkm/capita	5080.00	7426.72	9208.60	9233.14	9216.97	9247.22	9315.14	9243.41	9187.33	9210.37	81%	3.56%
Road and Rail freight tkm/\$ of GDP	0.10	0.09	0.10	0.11	0.10	0.09	0.11	0.11	0.11	0.11	17%	0.92%
Passenger cars per 1000 inhabitants	162	258	412	429	..	471	..	..	..	..	..	8.56%

CO2 Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
IEA CO ₂ from fuel combustion (Mt)*	42.68	51.34	63.26	62.22	66.16	62.13	63.97	66.66	60.61	59.91	40%	2.01%
... of which transport CO ₂ (Mt)*	13.08	16.03	21.63	21.16	21.74	23.12	23.96	23.01	23.26	23.43	79%	3.49%
Transport* as a percentage of total	30.6%	31.2%	34.2%	34.0%	32.9%	37.2%	37.5%	34.5%	38.4%	39.1%		
Road (Mt)	9.04	12.25	16.79	17.05	17.56	18.61	19.15	18.35	18.3	18.07	100%	4.16%
Rail (Mt)	0.17	0.17	0.17	0.13	0.11	0.09	0.08	0.08	0.07	0.07	-59%	-5.09%
Domestic Aviation (Mt)	0.24	0.35	0.66	0.5	0.44	0.44	0.44	0.49	0.46	0.36	50%	2.41%
International Aviation (Mt)	1.49	1.49	1.69	1.74	1.77	1.87	2.05	2.13	2.28	2.61	75%	3.35%
Domestic Navigation (Mt)	0.13	0.14	0.13	0.15	0.27	0.2	0.08	0.05	0.06	0.09	-31%	-2.14%
International Shipping (Mt)	1.91	1.52	2.08	1.49	1.51	1.82	2.07	1.82	2	2.1	10%	0.56%
Other Transport (Mt)	0.1	0.1	0.1	0.1	0.08	0.08	0.09	0.08	0.08	0.14	40%	2.00%

GHG Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
UNFCCC GHG emissions (Mt CO ₂ eq.)*	62.13	73.07	85.36	87.05	91.84	87.31	90.18	93.04	88.77	86.14	39%	1.94%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	43.00	51.14	62.55	62.84	66.71	62.58	64.87	67.17	62.87	60.29	40%	2.01%
... of which transport GHG (Mt CO ₂ eq.)*	13.01	16.18	23.02	22.77	23.25	23.62	23.99	23.70	24.02	23.80	83%	3.61%
Road (Mt)	9.46	12.81	18.70	19.01	19.50	19.43	19.35	19.19	19.26	18.82	99%	4.13%
International Aviation (Mt)	1.47	1.62	1.98	1.93	1.84	2.02	2.17	2.26	2.39	2.52	72%	3.23%
International Shipping (Mt)	1.39	1.11	1.66	1.16	1.22	1.51	1.77	1.55	1.69	1.77	27%	1.43%

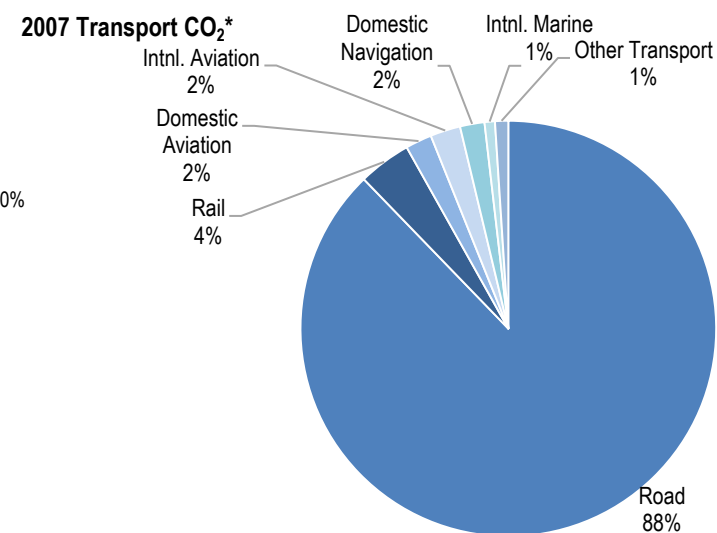
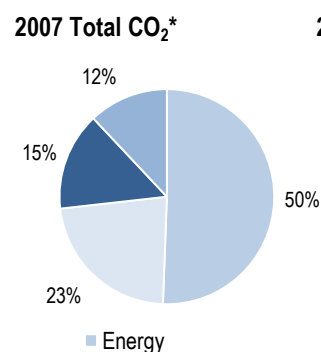
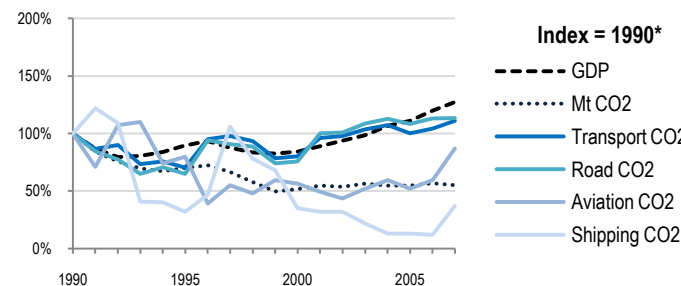
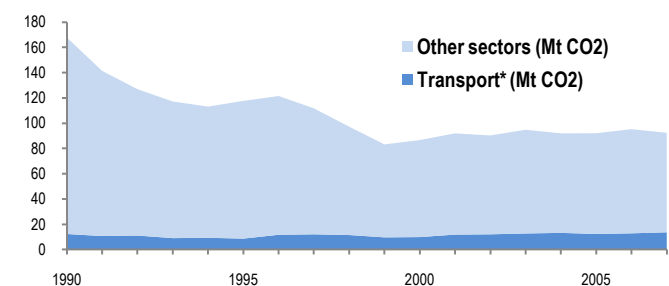
* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

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Romania

EU-27 92.4 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-45%	92.36	-41%	4.29	-57%	0.46
Transport CO ₂	11%	13.65	20%	0.63	-13%	0.07
Road CO ₂	13%	11.98	22%	0.56	-11%	0.06
Aviation CO ₂	-13%	0.6	-6%	0.03	-32%	0.00
Shipping CO ₂	-63%	0.37	-60%	0.02	-71%	0.00



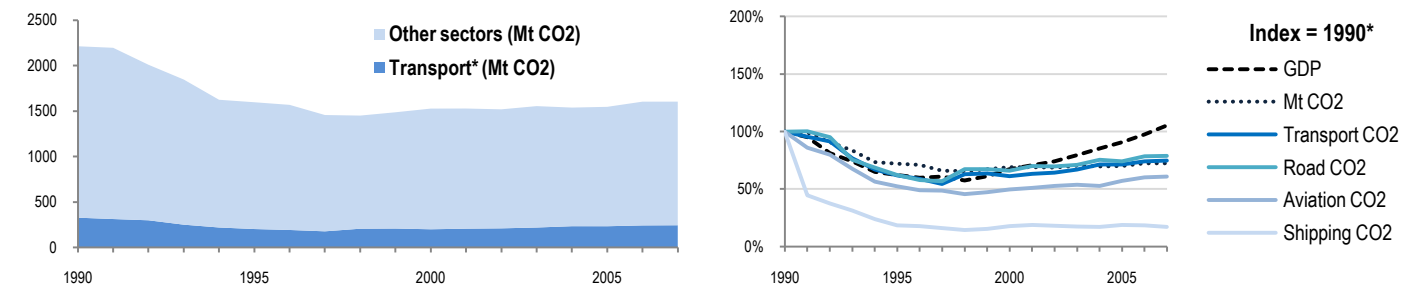
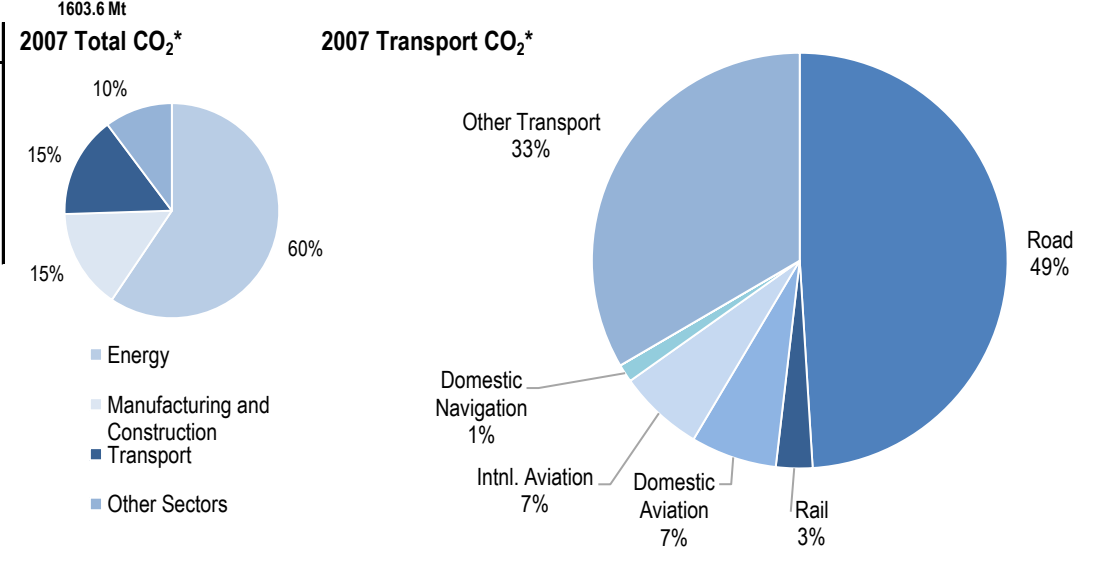
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	23.21	22.68	22.44	22.13	21.80	21.74	21.69	21.63	21.59	21.55	-7%	-0.44%
GDP PPP (billion 2000 US dollars)	157.05	141.03	132.28	139.82	146.95	154.59	167.58	174.57	188.36	199.67	27%	1.42%
Road passenger km (million pkm)	24007	12343	7700	7073	6987	9455	9438	11812	11735	12156	-49%	-3.92%
Road and Rail freight tkm (million tkm)	62461	31365	27861	28605	28473	30579	33077	35981	38507	39684	-36%	-2.63%
Road pkm/capita	1034.34	544.22	343.14	319.61	320.50	434.91	435.13	546.09	543.54	564.08	-45%	-3.50%
Road and Rail freight tkm/\$ of GDP	0.40	0.22	0.21	0.20	0.19	0.20	0.20	0.21	0.20	0.20	-50%	-4.00%
Passenger cars per 1000 inhabitants	..	..	..	..	..	..	..	..	..	..	..	..
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	167.77	117.61	86.64	91.95	90.26	94.79	91.93	92.03	95.26	92.36	-45%	-3.45%
... of which transport CO ₂ (Mt)*	12.3	8.66	9.85	11.81	12.04	12.73	13.19	12.32	12.84	13.65	11%	0.61%
Transport* as a percentage of total	7.3%	7.4%	11.4%	12.8%	13.3%	13.4%	14.3%	13.4%	13.5%	14.8%		
Road (Mt)	10.58	6.87	8.02	10.59	10.66	11.48	11.94	11.47	11.97	11.98	13%	0.73%
Rail (Mt)	0.03	0.88	0.9	0.45	0.6	0.53	0.61	0.23	0.22	0.56	1767%	18.79%
Domestic Aviation (Mt)	0	0.01	0.02	0.01	0.01	0.01	0.01	0.03	0.01	0.28	..	32.01%
International Aviation (Mt)	0.69	0.54	0.37	0.33	0.29	0.35	0.4	0.33	0.4	0.32	-54%	-4.42%
Domestic Navigation (Mt)	1	0.32	0.35	0.32	0.32	0.22	0.13	0.13	0.12	0.26	-74%	-7.62%
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0.11	..	..
Other Transport (Mt)	0	0.05	0.18	0.1	0.15	0.15	0.11	0.13	0.12	0.14	..	8.96%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	244.09	181.37	136.01	140.77	146.99	153.90	155.79	149.88	154.38	152.93	-37%	-2.71%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	150.25	112.88	83.50	88.36	92.51	98.11	98.10	91.21	94.64	93.83	-38%	-2.73%
... of which transport GHG (Mt CO ₂ eq.)*	8.74	8.91	9.89	11.47	12.38	12.57	15.00	12.39	12.89	13.49	54%	2.59%
Road (Mt)	6.51	7.31	8.29	10.65	11.36	11.55	13.92	11.56	12.02	12.10	86%	3.71%
International Aviation (Mt)	0.17	0.36	0.28	0.27	0.25	0.34	0.36	0.41	0.45	0.42	148%	5.49%
International Shipping (Mt)	0.88	0.24	0.21	0.03	0.07	0.03	0.04	0.09	0.09	0.22	-75%	-7.93%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Russian Federation

EU-27 N. America Asia-Pacific ITF-other **1603.6 Mt** Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-28%	1603.64	-24%	11.32	-31%	1.00
Transport CO ₂	-25%	245.05	-22%	1.73	-29%	0.15
Road CO ₂	-21%	120.1	-17%	0.85	-25%	0.07
Aviation CO ₂	-39%	32.68	-36%	0.23	-42%	0.02
Shipping CO ₂	-83%	3.45	-82%	0.02	-84%	0.00



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	148.29	148.14	146.30	145.95	145.30	144.60	143.85	143.15	142.50	141.64	-4%	-0.27%
GDP PPP (billion 2000 US dollars)	1523.63	946.46	1025.42	1077.63	1128.75	1211.69	1298.25	1381.34	1483.56	1603.73	5%	0.30%
Road passenger km (million pkm)	262152	188246	164369	154861	149914	138454	129436	96284	83935	52258	-80%	-9.05%
Road and Rail freight tkm (million tkm)	2822277	1370194	1525913	1593469	1677441	1842067	1983742	2051690	2149596	2296186	-19%	-1.21%
Road pkm/capita	1767.83	1270.73	1123.51	1061.06	1031.75	957.50	899.80	672.61	589.02	368.95	-79%	-8.80%
Road and Rail freight tkm/\$ of GDP	1.85	1.45	1.49	1.48	1.49	1.52	1.53	1.49	1.45	1.43	-23%	-1.50%
Passenger cars per 1000 inhabitants	..	96	139	..	156	161	..	..	188	..	..	8.76%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	2212.11	1596.93	1527.06	1528.11	1518.87	1554.42	1538.27	1546.51	1603.31	1603.64	-28%	-1.87%
... of which transport CO ₂ (Mt)*	328.34	203.33	200.83	207.61	211.08	220.19	234.45	234.31	243.36	245.05	-25%	-1.71%
Transport* as a percentage of total	14.8%	12.7%	13.2%	13.6%	13.9%	14.2%	15.2%	15.2%	15.2%	15.3%		
Road (Mt)	152.39	94.61	100.63	106.78	106.06	108.38	115.16	112.67	119.74	120.1	-21%	-1.39%
Rail (Mt)	18.69	6.68	6.46	5.46	6.1	5.71	6.4	6.65	7.56	6.95	-63%	-5.65%
Domestic Aviation (Mt)	27.41	14.23	13.37	13.75	14.27	14.5	14.24	15.39	16.25	16.4	-40%	-2.98%
International Aviation (Mt)	26.37	13.99	13.27	13.65	14.16	14.39	14.13	15.27	16.13	16.28	-38%	-2.80%
Domestic Navigation (Mt)	14.39	3.74	3.6	3.79	3.64	3.56	3.45	3.84	3.74	3.45	-76%	-8.06%
International Shipping (Mt)	5.87	0	0	0	0	0	0	0	0	0	-100%	-99.98%
Other Transport (Mt)	83.21	70.08	63.49	64.18	66.86	73.66	81.07	80.48	79.94	81.88	-2%	-0.09%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	3331.40	2183.92	2037.42	2061.90	2064.09	2105.87	2121.44	2125.71	2194.29	2202.23	-34%	-2.41%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	2294.38	1444.49	1331.64	1348.53	1338.51	1362.85	1357.39	1356.15	1402.58	1390.24	-39%	-2.90%
... of which transport GHG (Mt CO ₂ eq.)*	353.36	193.16	159.20	167.94	173.90	182.59	190.20	198.17	207.35	215.86	-39%	-2.86%
Road (Mt)	177.52	99.46	71.79	80.12	82.28	84.79	83.61	93.44	101.52	107.56	-39%	-2.90%
International Aviation (Mt)	4.41	4.77	5.22	5.35	5.33	5.57	6.43	6.26	6.83	7.99	81%	3.56%
International Shipping (Mt)	7.66	3.00	1.77	1.96	1.91	1.85	1.92	1.63	1.58	1.42	-82%	-9.46%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

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Serbia

EU-27

N. America

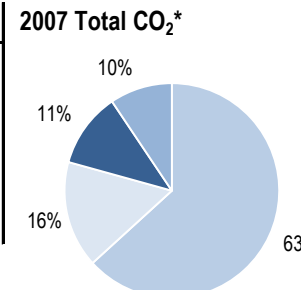
Asia-Pacific

ITF-other

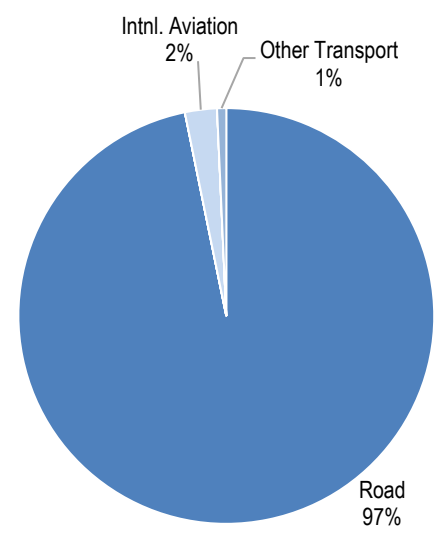
Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-19%	49.85	8%	6.75	-37%	1.03
Transport CO ₂	16%	5.63	56%	0.76	-10%	0.12
Road CO ₂	23%	5.45	66%	0.74	-4%	0.11
Aviation CO ₂	-67%	0.14	-56%	0.02	-75%	0.00
Shipping CO ₂	..	0	..	0.00	..	0.00

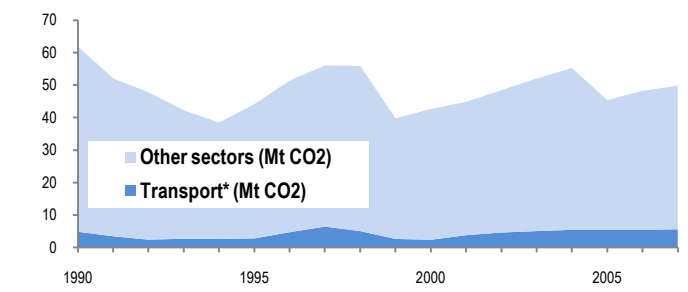
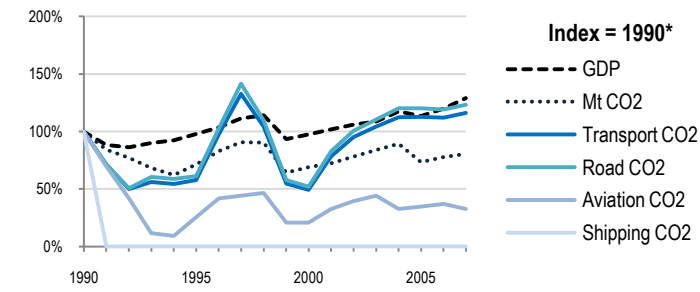
49.8 Mt



2007 Transport CO₂*



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Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	9.93	10.86	8.19	8.17	8.15	8.12	8.08	7.44	7.41	7.39	-26%	-1.72%
GDP PPP (billion 2000 US dollars)	37.53	36.76	36.62	38.26	39.79	40.79	44.08	42.56	44.99	48.37	29%	1.50%
Road passenger km (million pkm)	23264	12896	3056	4257	4086	3865	3676	4820	5480	4456	-81%	-9.26%
Road and Rail freight tkm (million tkm)	15789	5898	2499	2464	2721	3043	3441	4161	5030	5712	-64%	-5.81%
Road pkm/capita	2342.80	1187.48	373.14	521.05	501.35	475.99	454.95	647.85	739.54	602.98	-74%	-7.67%
Road and Rail freight tkm/\$ of GDP	0.42	0.16	0.07	0.06	0.07	0.07	0.08	0.10	0.11	0.12	-72%	-7.20%
Passenger cars per 1000 inhabitants	..	..	..	..	..	..	..	..	204	..	..	..
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	61.87	44.12	42.63	44.84	48.4	51.96	55.26	45.38	48.2	49.85	-19%	-1.26%
... of which transport CO ₂ (Mt)*	4.85	2.81	2.39	3.8	4.61	5.06	5.45	5.46	5.43	5.63	16%	0.88%
Transport* as a percentage of total	7.8%	6.4%	5.6%	8.5%	9.5%	9.7%	9.9%	12.0%	11.3%	11.3%		
Road (Mt)	4.42	2.7	2.3	3.66	4.44	4.87	5.31	5.31	5.27	5.45	23%	1.24%
Rail (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0.43	0.11	0.09	0.14	0.17	0.19	0.14	0.15	0.16	0.14	-67%	-6.39%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0.04	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Slovak Republic

EU-27

N. America

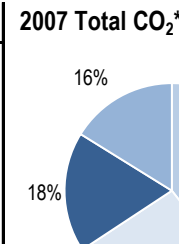
Asia-Pacific

ITF-other

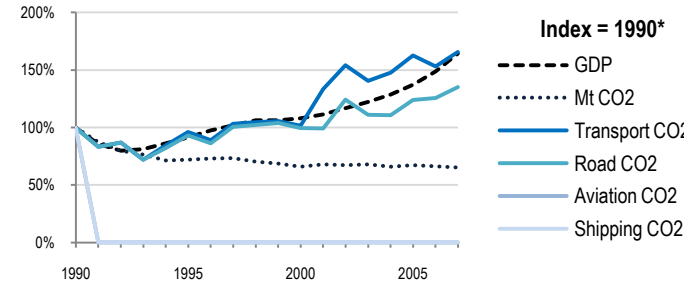
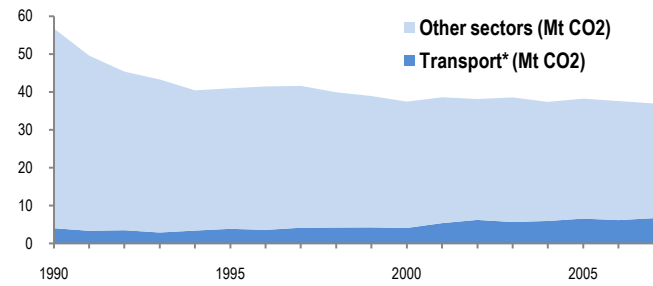
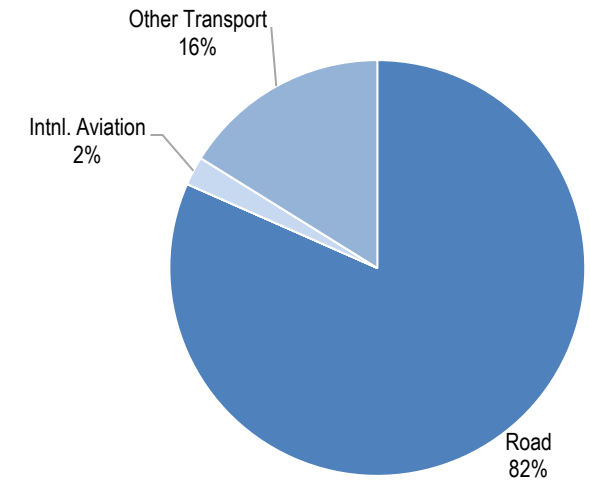
Top 10 non-ITF

37.0 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-35%	36.95	-36%	6.84	-60%	0.41
Transport CO ₂	66%	6.69	63%	1.24	1%	0.07
Road CO ₂	35%	5.46	33%	1.01	-18%	0.06
Aviation CO ₂	..	0.15	..	0.03	..	0.00
Shipping CO ₂	..	0	..	0.00	..	0.00



2007 Transport CO₂*



Transport and the Economy

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	5.30	5.36	5.40	5.38	5.38	5.38	5.38	5.39	5.39	5.40	2%	0.11%
GDP PPP (billion 2000 US dollars)	54.90	50.11	59.20	61.22	64.12	67.16	70.62	75.25	81.64	90.15	64%	2.96%
Road passenger km (million pkm)	0	29168	32364	32309	33214	32981	32214	33564	34158	33731	..	1.22%
Road and Rail freight tkm (million tkm)	0	40210	25575	24728	25312	26972	28219	32013	32102	36697	..	-0.76%
Road pkm/capita	0.00	5441.79	5993.33	6005.39	6173.61	6130.30	5987.73	6227.09	6337.29	6246.48	..	1.16%
Road and Rail freight tkm/\$ of GDP	0.00	0.80	0.43	0.40	0.39	0.40	0.40	0.43	0.39	0.41	..	-5.50%
Passenger cars per 1000 inhabitants	163	189	236	240	247	252	222	..	247	..	..	2.63%

CO2 Emissions

IEA CO ₂ from fuel combustion (Mt)*	56.73	40.95	37.45	38.58	38.12	38.55	37.36	38.22	37.58	36.95	-35%	-2.49%
... of which transport CO ₂ (Mt)*	4.04	3.88	4.1	5.39	6.23	5.68	5.96	6.57	6.18	6.69	66%	3.01%
<i>Transport* as a percentage of total</i>	7.1%	9.5%	10.9%	14.0%	16.3%	14.7%	16.0%	17.2%	16.4%	18.1%		
Road (Mt)	4.04	3.76	4.02	4	5.02	4.49	4.47	5.01	5.07	5.46	35%	1.79%
Rail (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0.04	0.01	0	..	..
International Aviation (Mt)	0	0.12	0.08	0.09	0.14	0.1	0.08	0.12	0.12	0.15	..	1.88%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0	0	0	1.3	1.07	1.09	1.4	1.4	0.97	1.08	..	-3.04%

GHG Emissions

UNFCCC GHG emissions (Mt CO ₂ eq.)*	73.39	52.71	48.47	50.16	49.06	50.27	50.07	49.47	49.07	47.11	-36%	-2.57%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	58.93	41.42	37.26	38.65	36.87	38.57	37.49	37.26	36.51	34.66	-41%	-3.07%
... of which transport GHG (Mt CO ₂ eq.)*	5.17	4.49	4.38	5.01	5.15	5.26	5.55	6.52	6.08	6.88	33%	1.70%
Road (Mt)	4.59	4.14	4.15	4.75	4.90	5.04	5.33	6.30	5.80	6.58	43%	2.14%
International Aviation (Mt)	0.06	0.05	0.04	0.04	0.04	0.06	0.08	0.09	0.10	0.12	86%	3.72%
International Shipping (Mt)	0.07	0.07	0.00	0.03	0.03	0.02	0.01	0.00	0.03	0.04	-44%	-3.35%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Slovenia

EU-27

N. America

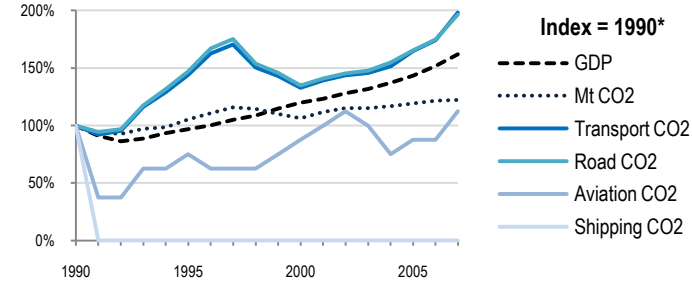
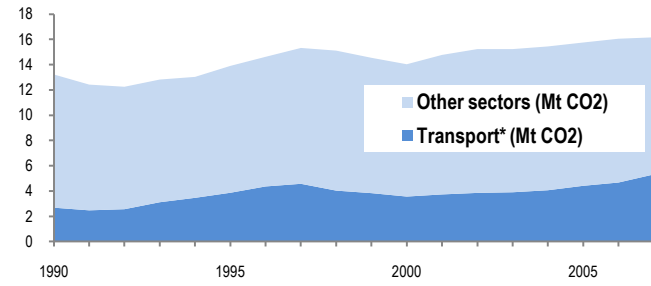
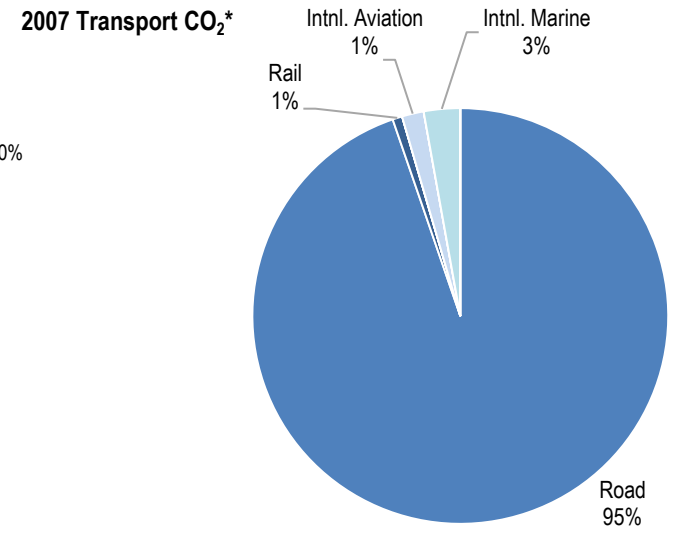
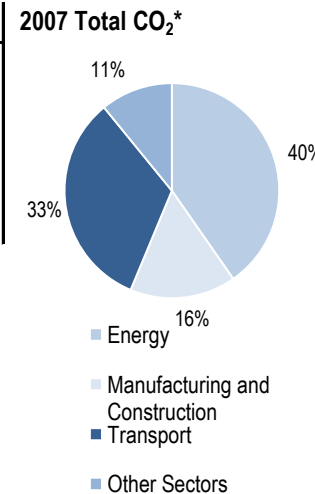
Asia-Pacific

ITF-other

Top 10 non-ITF

16.2 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	22%	16.16	21%	8.00	-24%	0.35
Transport CO ₂	98%	5.31	96%	2.63	22%	0.11
Road CO ₂	96%	5.03	95%	2.49	21%	0.11
Aviation CO ₂	13%	0.09	11%	0.04	-31%	0.00
Shipping CO ₂	..	0.15	..	0.07	..	0.00



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	2.00	1.99	1.99	1.99	1.99	2.00	2.00	2.00	2.01	2.02	1%	0.06%
GDP PPP (billion 2000 US dollars)	28.82	27.86	34.49	35.47	36.88	37.92	39.55	41.27	43.70	46.66	62%	2.87%
Road passenger km (million pkm)	19828	20451	23827	24194	24626	24777	25260	25571	26139	27590	39%	1.96%
Road and Rail freight tkm (million tkm)	9096	4778	4794	4764	5023	5269	5416	5606	5652	6175	-32%	-2.25%
Road pkm/capita	9914.00	10276.88	11973.37	12157.79	12374.87	12388.50	12630.00	12785.50	13004.48	13658.42	38%	1.90%
Road and Rail freight tkm/\$ of GDP	0.32	0.17	0.14	0.13	0.14	0.14	0.14	0.14	0.13	0.13	-58%	-4.98%
Passenger cars per 1000 inhabitants	289	351	426	447	452	460	470	482	493	..	..	3.39%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	13.22	13.9	14.03	14.77	15.23	15.23	15.44	15.75	16.05	16.16	22%	1.19%
... of which transport CO ₂ (Mt)*	2.68	3.86	3.56	3.73	3.85	3.9	4.06	4.41	4.67	5.31	98%	4.10%
Transport* as a percentage of total	20.3%	27.8%	25.4%	25.3%	25.3%	25.6%	26.3%	28.0%	29.1%	32.9%		
Road (Mt)	2.56	3.76	3.45	3.61	3.72	3.78	3.96	4.23	4.47	5.03	96%	4.05%
Rail (Mt)	0.03	0.04	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	33%	1.71%
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	0.08	0.06	0.07	0.08	0.09	0.08	0.06	0.07	0.07	0.09	13%	0.70%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0	0	0	0	0	0	0	0.07	0.09	0.15	..	46.39%
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	18.65	18.77	18.98	19.86	20.14	19.82	20.11	20.44	20.75	21.00	13%	0.70%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	14.02	14.51	14.72	15.59	15.74	15.45	15.77	16.03	16.29	16.49	18%	0.96%
... of which transport GHG (Mt CO ₂ eq.)*	2.82	3.83	3.90	4.05	4.07	4.21	4.35	4.63	4.98	5.67	101%	4.19%
Road (Mt)	2.67	3.72	3.79	3.93	3.94	4.09	4.24	4.53	4.75	5.35	101%	4.18%
International Aviation (Mt)	0.08	0.06	0.07	0.08	0.08	0.08	0.06	0.07	0.07	0.10	23%	1.21%
International Shipping (Mt)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.18	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

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Spain

EU-27

381.5 Mt

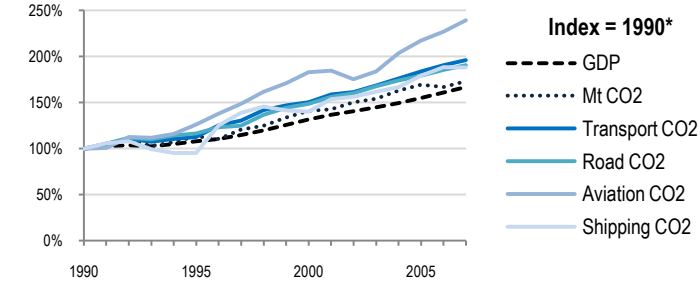
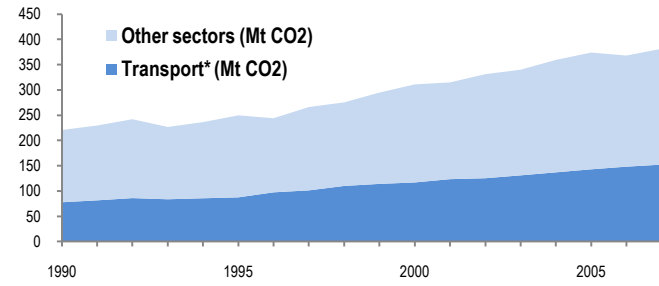
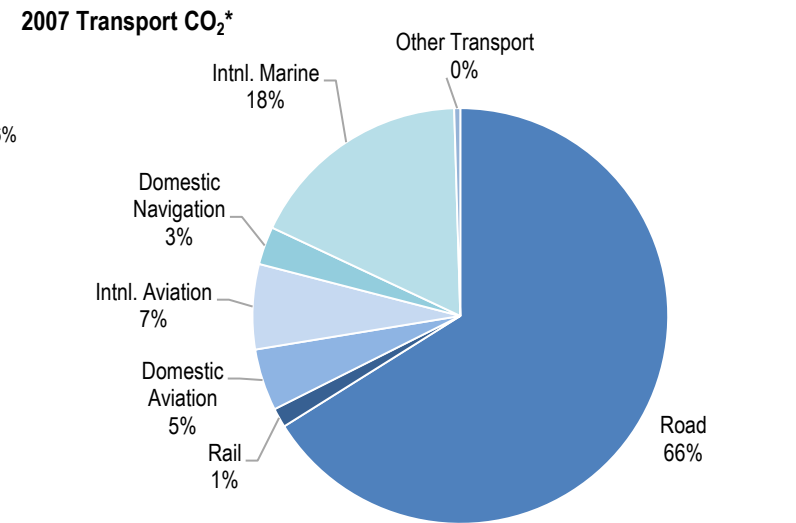
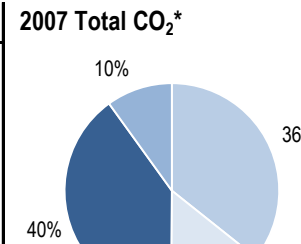
N. America

Asia-Pacific

ITF-other

Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	73%	381.48	50%	8.50	4%	0.35
Transport CO ₂	96%	152.23	70%	3.39	18%	0.14
Road CO ₂	91%	100.61	66%	2.24	14%	0.09
Aviation CO ₂	139%	17.4	108%	0.39	43%	0.02
Shipping CO ₂	88%	31.21	63%	0.70	13%	0.03



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	39.01	39.39	40.26	40.72	41.31	42.01	42.69	43.40	44.07	44.87	15%	0.83%
GDP PPP (billion 2000 US dollars)	650.66	701.18	857.44	888.72	912.75	941.01	971.76	1006.88	1046.04	1084.35	67%	3.05%
Road passenger km (million pkm)	207765	251189	330263	336520	362576	371137	383650	390973	390306	402456	94%	3.97%
Road and Rail freight tkm (million tkm)	102143	112293	160885	173363	191766	199456	226735	239022	247389	264891	159%	5.77%
Road pkm/capita	5325.94	6376.97	8203.25	8264.24	8776.95	8834.49	8986.88	9008.59	8856.50	8969.38	68%	3.11%
Road and Rail freight tkm/\$ of GDP	0.16	0.16	0.19	0.20	0.21	0.21	0.23	0.24	0.24	0.24	56%	2.64%
Passenger cars per 1000 inhabitants	309	362	431	446	454	445	..	..	..	..	..	2.85%

CO2 Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
IEA CO ₂ from fuel combustion (Mt)*	220.63	249.68	310.87	314.82	331.15	339.95	359.38	373.89	367.96	381.48	73%	3.27%
... of which transport CO ₂ (Mt)*	77.72	87.45	116.91	123.39	125.24	130.93	136.9	142.87	148.15	152.23	96%	4.03%
Transport* as a percentage of total	35.2%	35.0%	37.6%	39.2%	37.8%	38.5%	38.1%	38.2%	40.3%	39.9%		
Road (Mt)	52.76	61.27	78.35	82.33	84.38	88.39	91.77	94.56	97.71	100.61	91%	3.87%
Rail (Mt)	0.66	0.89	1.51	1.61	1.58	1.76	2.01	2.18	1.94	2.3	248%	7.62%
Domestic Aviation (Mt)	3.96	3.18	5.28	5.26	4.9	5.13	5.68	6.62	6.96	7.33	85%	3.69%
International Aviation (Mt)	3.32	6.01	8.03	8.18	7.87	8.25	9.15	9.18	9.57	10.07	203%	6.74%
Domestic Navigation (Mt)	5.16	5.83	4.28	4.27	4.29	4.8	4.95	4.75	5.19	4.5	-13%	-0.80%
International Shipping (Mt)	11.46	10	18.97	21.23	21.68	22.09	22.78	25	26.11	26.71	133%	5.10%
Other Transport (Mt)	0.4	0.27	0.49	0.52	0.54	0.51	0.56	0.57	0.68	0.72	80%	3.52%

GHG Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
UNFCCC GHG emissions (Mt CO ₂ eq.)*	303.24	335.61	413.44	416.23	433.35	441.38	458.77	476.12	469.56	479.94	58%	2.74%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	223.35	252.95	312.84	318.91	337.11	341.84	360.18	378.19	369.71	378.99	70%	3.16%
... of which transport GHG (Mt CO ₂ eq.)*	72.59	83.43	114.62	121.33	123.33	128.60	134.05	140.52	145.10	149.89	106%	4.36%
Road (Mt)	51.36	61.68	79.15	83.09	85.03	89.12	92.36	95.46	98.06	100.86	96%	4.05%
International Aviation (Mt)	3.48	6.29	8.47	8.62	8.29	8.70	9.65	9.60	10.01	10.53	203%	6.74%
International Shipping (Mt)	11.63	10.15	19.20	21.48	22.00	22.42	23.11	25.37	26.48	27.09	133%	5.10%

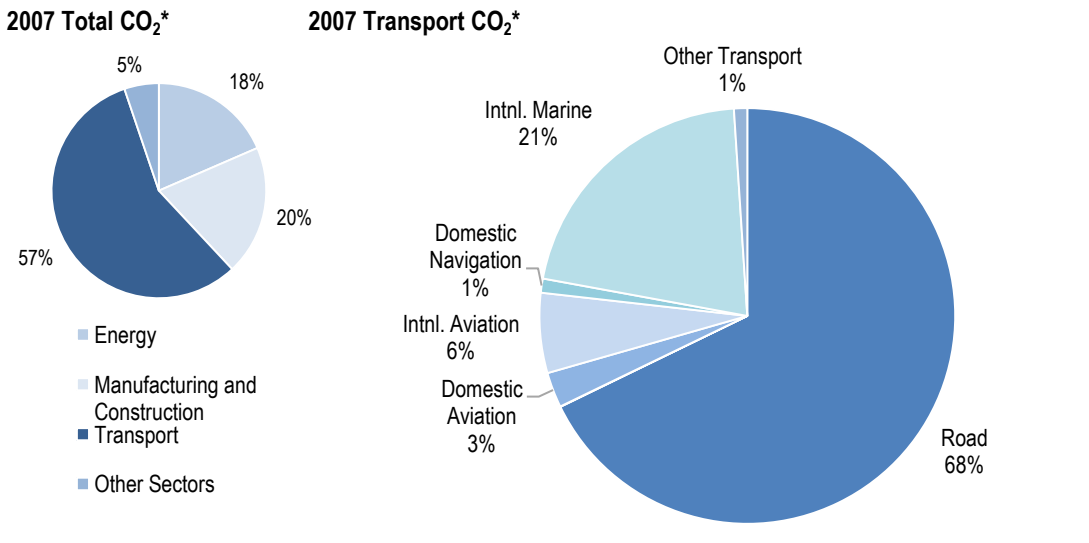
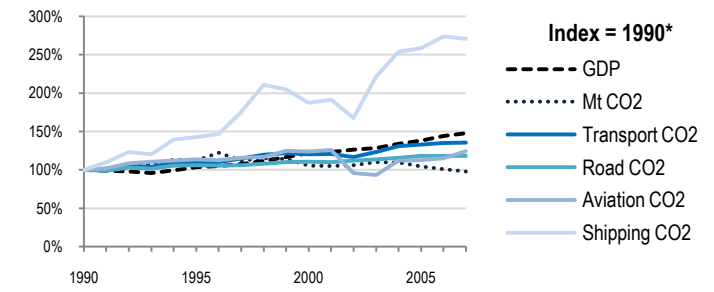
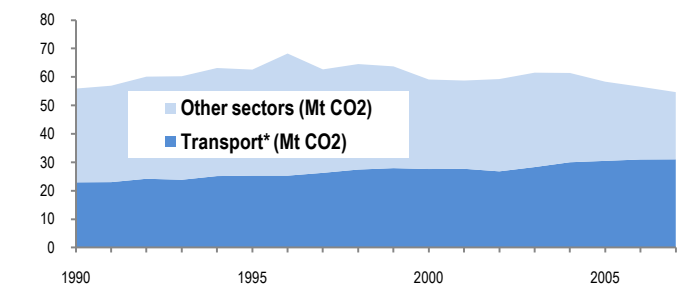
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Sweden

EU-27 54.7 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	kg/\$2000 PPP	2007
Total CO ₂	-2%	54.67	-9%	5.97	-34%	0.18
Transport CO ₂	35%	31.03	27%	3.39	-8%	0.10
Road CO ₂	18%	21.03	10%	2.30	-20%	0.07
Aviation CO ₂	24%	2.78	16%	0.30	-16%	0.01
Shipping CO ₂	171%	6.88	153%	0.75	83%	0.02



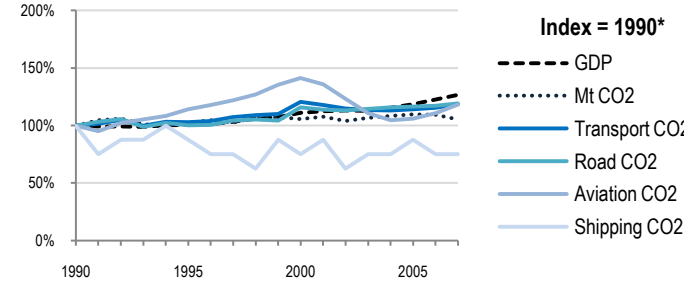
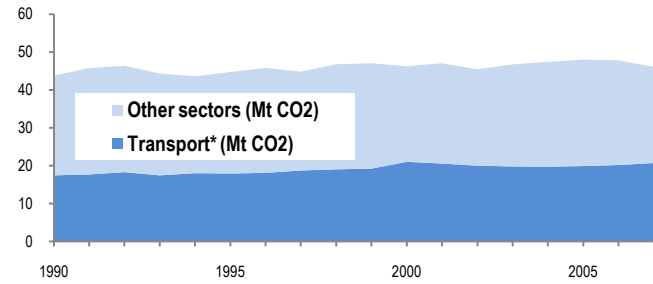
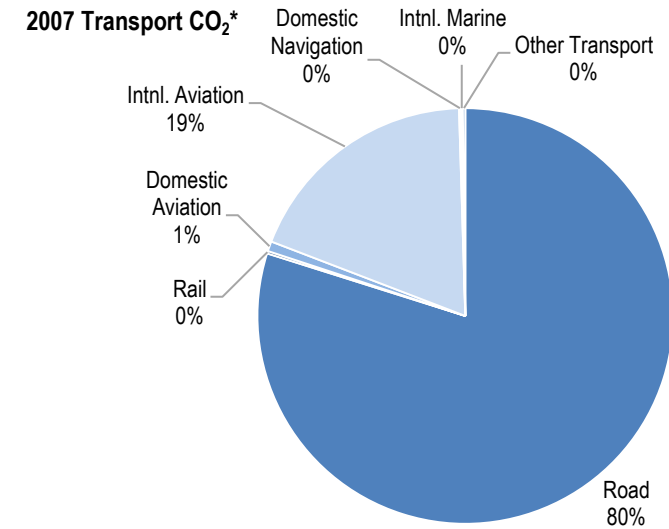
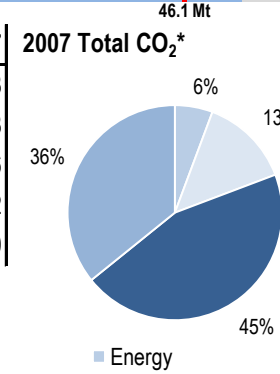
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	8.56	8.83	8.87	8.90	8.93	8.96	8.99	9.03	9.08	9.15	7%	0.39%
GDP PPP (billion 2000 US dollars)	201.85	208.73	245.98	248.58	254.58	259.45	270.15	279.06	290.91	298.31	48%	2.32%
Road passenger km (million pkm)	95600	97300	101400	102000	104700	105400	105900	106100	105900	108000	13%	0.72%
Road and Rail freight tkm (million tkm)	36091	38684	43775	42471	44208	44289	45860	48807	50349	52057	44%	2.18%
Road pkm/capita	11168.22	11019.25	11431.79	11460.67	11724.52	11763.39	11779.76	11749.72	11663.00	11803.28	6%	0.33%
Road and Rail freight tkm/\$ of GDP	0.18	0.19	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.17	-2%	-0.14%
Passenger cars per 1000 inhabitants	426.00	411.00	451.00	452.00	453.00	455.00	458.00	460.00	462.00	...		0.51%
CO₂ Emissions												
IEA CO ₂ from fuel combustion (Mt)*	55.91	62.58	59.1	58.74	59.25	61.5	61.4	58.33	56.56	54.67	-2%	-0.13%
... of which transport CO ₂ (Mt)*	22.93	25.29	27.61	27.7	26.8	28.3	30	30.48	30.97	31.03	35%	1.80%
Transport* as a percentage of total	41.0%	40.4%	46.7%	47.2%	45.2%	46.0%	48.9%	52.3%	54.8%	56.8%		
Road (Mt)	17.82	18.91	19.74	19.65	20	20.23	20.63	21.08	21.11	21.03	18%	0.98%
Rail (Mt)	0.12	0.12	0.07	0.07	0.08	0.08	0.07	0.01	0.01	0.01	-92%	-13.60%
Domestic Aviation (Mt)	1.17	0.78	0.71	0.72	0.59	0.58	0.66	0.65	0.62	0.85	-27%	-1.86%
International Aviation (Mt)	1.07	1.76	2.06	2.1	1.56	1.51	1.85	1.87	1.96	1.93	80%	3.53%
Domestic Navigation (Mt)	0.45	0.32	0.48	0.48	0.46	0.54	0.46	0.45	0.38	0.34	-24%	-1.64%
International Shipping (Mt)	2.09	3.3	4.28	4.38	3.79	5.09	5.99	6.12	6.57	6.54	213%	6.94%
Other Transport (Mt)	0.21	0.1	0.27	0.29	0.32	0.28	0.34	0.31	0.32	0.32	52%	2.51%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	75.55	78.60	74.96	75.41	75.37	77.42	78.12	75.91	76.16	75.17	-1%	-0.03%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	55.81	58.73	56.24	56.71	56.98	59.19	59.61	57.38	57.25	56.73	2%	0.10%
... of which transport GHG (Mt CO ₂ eq.)*	22.20	23.92	26.08	26.10	25.84	27.54	29.09	29.65	30.04	30.59	38%	1.90%
Road (Mt)	17.07	17.68	17.78	18.00	18.61	18.84	19.18	19.48	19.38	19.52	14%	0.79%
International Aviation (Mt)	1.35	1.46	1.95	1.90	1.63	1.59	1.79	1.96	2.03	2.22	64%	2.97%
International Shipping (Mt)	2.26	3.56	4.85	4.73	4.17	5.61	6.61	6.75	7.25	7.54	233%	7.33%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Switzerland

EU-27 N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	5%	46.08	-5%	6.14	-17%	0.18
Transport CO ₂	19%	20.71	7%	2.76	-6%	0.08
Road CO ₂	19%	16.54	8%	2.20	-6%	0.06
Aviation CO ₂	18%	4.03	7%	0.54	-7%	0.02
Shipping CO ₂	-25%	0.06	-32%	0.01	-41%	0.00



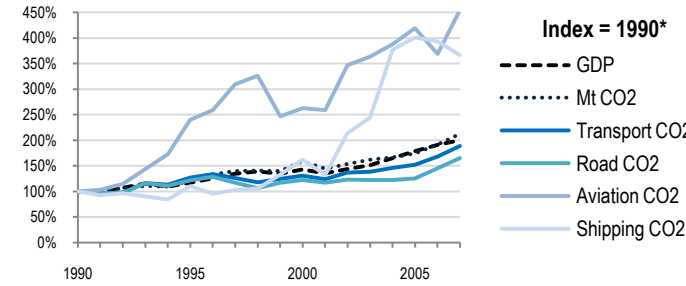
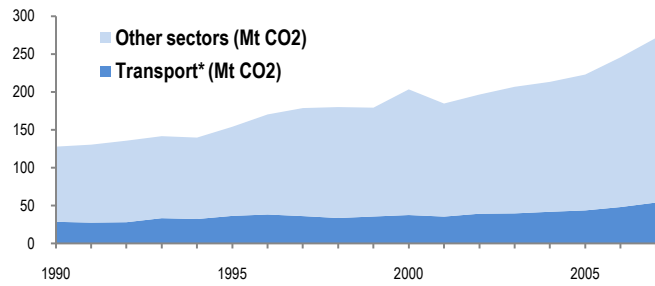
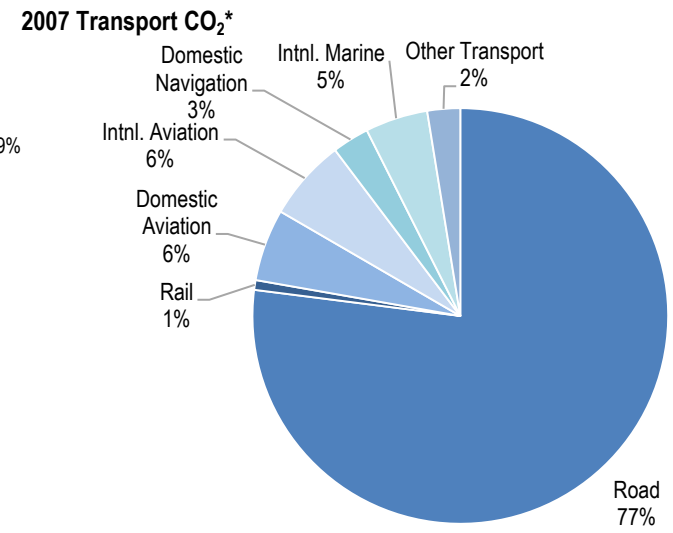
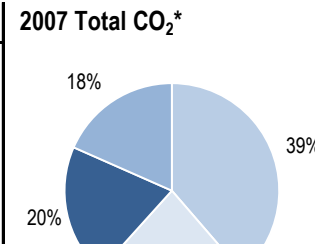
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	6.80	7.02	7.16	7.20	7.26	7.31	7.36	7.42	7.46	7.51	10%	0.59%
GDP PPP (billion 2000 US dollars)	204.77	205.79	227.67	230.30	231.32	230.86	236.71	242.63	250.84	259.18	27%	1.40%
Road passenger km (million pkm)	78878	81061	85815	87316	89233	90734	92580	93648	95829	96199	22%	1.17%
Road and Rail freight tkm (million tkm)	19851	23113	32735	32687	32195	31861	33886	35887	37702	40028	102%	4.21%
Road pkm/capita	11599.71	11547.15	11985.34	12127.22	12291.05	12412.31	12578.80	12621.02	12845.71	12809.45	10%	0.59%
Road and Rail freight tkm/\$ of GDP	0.10	0.11	0.14	0.14	0.14	0.14	0.14	0.15	0.15	0.15	59%	2.78%
Passenger cars per 1000 inhabitants	449	459	493	502	508	512	516	520	520	..	..	0.92%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	43.77	44.71	46.25	47.04	45.42	46.73	47.4	48	47.78	46.08	5%	0.30%
... of which transport CO ₂ (Mt)*	17.46	17.95	21.02	20.58	20.01	19.81	19.75	19.91	20.18	20.71	19%	1.01%
Transport* as a percentage of total	39.9%	40.1%	45.4%	43.8%	44.1%	42.4%	41.7%	41.5%	42.2%	44.9%		
Road (Mt)	13.87	13.9	16.05	15.79	15.7	15.89	16.04	16.16	16.26	16.54	19%	1.04%
Rail (Mt)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	33%	1.71%
Domestic Aviation (Mt)	0.41	0.26	0.25	0.2	0.28	0.21	0.16	0.13	0.1	0.16	-61%	-5.38%
International Aviation (Mt)	3	3.63	4.57	4.43	3.92	3.57	3.41	3.48	3.68	3.87	29%	1.51%
Domestic Navigation (Mt)	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	50%	2.41%
International Shipping (Mt)	0.06	0.05	0.03	0.04	0.02	0.03	0.03	0.04	0.03	0.03	-50%	-4.00%
Other Transport (Mt)	0.06	0.06	0.06	0.05	0.03	0.05	0.05	0.04	0.04	0.04	-33%	-2.36%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	55.81	54.73	56.36	56.93	55.59	56.17	56.46	57.19	56.88	55.22	-1%	-0.06%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	44.66	44.95	46.81	47.30	46.10	46.83	46.97	47.63	47.37	45.65	2%	0.13%
... of which transport GHG (Mt CO ₂ eq.)*	17.87	18.07	20.73	20.16	19.69	19.44	19.33	19.46	19.73	20.31	14%	0.75%
Road (Mt)	14.17	13.86	15.55	15.26	15.16	15.34	15.46	15.54	15.63	15.94	12%	0.69%
International Aviation (Mt)	3.10	3.69	4.71	4.44	4.10	3.68	3.47	3.52	3.70	3.96	28%	1.45%
International Shipping (Mt)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Turkey

EU-27 N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	112%	271.05	61%	3.67	6%	0.33
Transport CO ₂	88%	54.02	43%	0.73	-6%	0.07
Road CO ₂	65%	41.6	26%	0.56	-17%	0.05
Aviation CO ₂	354%	6.45	245%	0.09	127%	0.01
Shipping CO ₂	267%	4.18	179%	0.06	83%	0.01



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	56.20	61.64	67.46	68.62	69.63	70.71	71.79	72.07	72.97	73.90	31%	1.62%
GDP PPP (billion 2000 US dollars)	410.58	480.87	588.55	555.02	589.23	620.26	678.33	735.32	786.01	821.01	100%	4.16%
Road passenger km (million pkm)	0	0	0	0	0	0	0	0	0	0	..	..
Road and Rail freight tkm (million tkm)	73740	121147	171447	158982	158136	160832	166270	175983	187075	191251	159%	5.77%
Road pkm/capita	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..
Road and Rail freight tkm/\$ of GDP	0.18	0.25	0.29	0.29	0.27	0.26	0.25	0.24	0.24	0.23	30%	1.54%
Passenger cars per 1000 inhabitants	34	52	66	66	66	66	75	80	84	..	..	5.82%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	127.81	154.02	203.35	184.66	196.47	206.73	213.23	222.88	245.64	271.05	112%	4.52%
... of which transport CO ₂ (Mt)*	28.66	36.49	37.59	35.55	39.34	39.77	41.89	43.71	48.12	54.02	88%	3.80%
Transport* as a percentage of total	22.4%	23.7%	18.5%	19.3%	20.0%	19.2%	19.6%	19.6%	19.6%	19.9%		
Road (Mt)	25.18	30.69	30.87	29.44	30.96	30.74	30.75	31.65	36.54	41.6	65%	3.00%
Rail (Mt)	0.72	0.77	0.63	0.52	0.52	0.55	0.55	0.67	0.67	0.41	-43%	-3.26%
Domestic Aviation (Mt)	0.89	2.63	2.19	2.14	2.36	2.49	2.64	2.74	2.33	3.03	240%	7.47%
International Aviation (Mt)	0.53	0.78	1.54	1.54	2.56	2.67	2.87	3.21	2.91	3.42	545%	11.59%
Domestic Navigation (Mt)	0.77	0.68	0.6	0.78	0.78	0.86	1.19	1.26	1.42	1.55	101%	4.20%
International Shipping (Mt)	0.37	0.58	1.25	0.73	1.66	1.93	3.11	3.31	3.06	2.63	611%	12.23%
Other Transport (Mt)	0.2	0.35	0.52	0.41	0.52	0.52	0.77	0.87	1.19	1.38	590%	12.03%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	170.06	220.72	279.96	262.10	270.62	286.28	296.60	312.42	332.67	372.64	119%	4.72%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	130.70	159.34	210.93	194.40	202.58	216.71	226.20	239.97	256.59	286.49	119%	4.72%
... of which transport GHG (Mt CO ₂ eq.)*	26.29	33.28	35.52	35.58	36.63	38.41	41.23	41.31	44.39	51.79	97%	4.07%
Road (Mt)	24.35	29.21	31.33	31.06	31.66	32.97	34.79	35.28	37.70	43.64	79%	3.49%
International Aviation (Mt)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..
International Shipping (Mt)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..	..

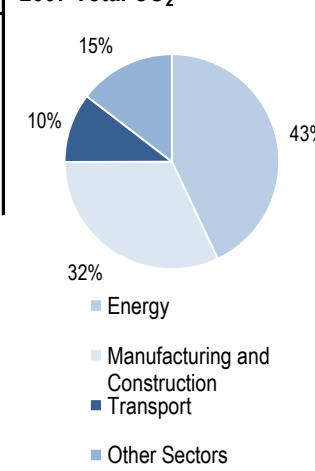
* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Ukraine

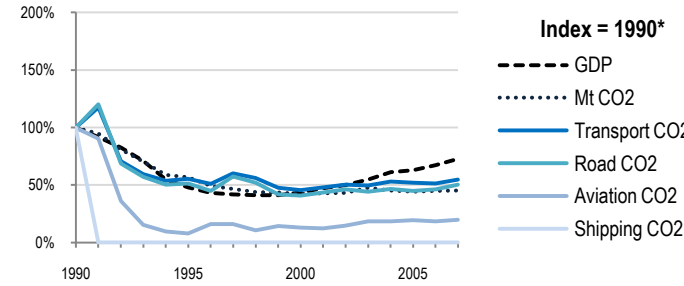
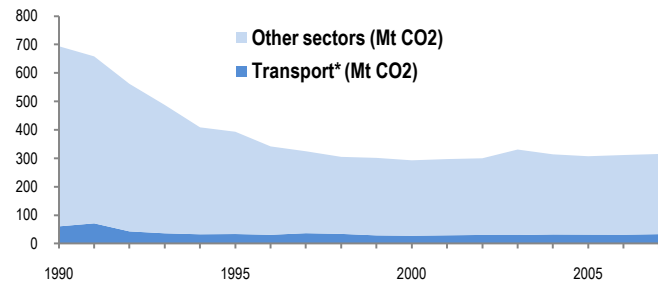
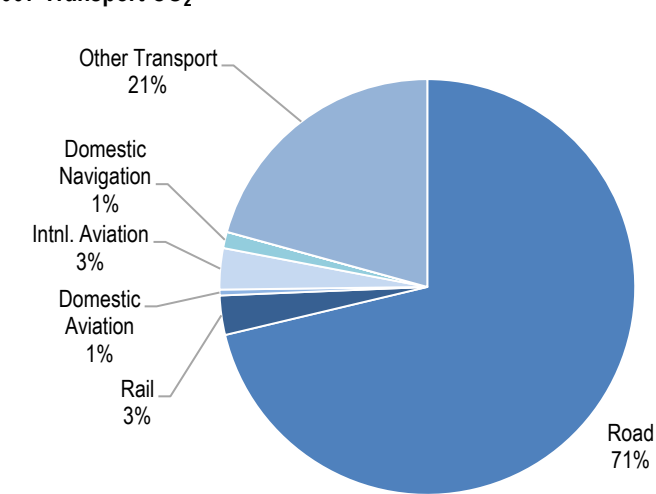
EU-27 N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-55%	315.02	-49%	6.79	-37%	0.95
Transport CO ₂	-45%	33.03	-39%	0.71	-25%	0.10
Road CO ₂	-50%	23.56	-44%	0.51	-31%	0.07
Aviation CO ₂	-80%	1.21	-78%	0.03	-73%	0.00
Shipping CO ₂	..	0.42	..	0.01	..	0.00

2007 Total CO₂* 315.0 Mt



2007 Transport CO₂*



Transport and the Economy

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	51.89	51.51	49.18	48.68	48.20	47.81	47.45	47.11	46.79	46.38	-11%	-0.66%
GDP PPP (billion 2000 US dollars)	456.90	219.32	198.51	216.77	228.05	249.48	279.67	287.22	308.19	331.61	-27%	-1.87%
Road passenger km (million pkm)	90323	34789	28917	30423	35385	39495	46841	51820	53343	55446	-39%	-2.83%
Road and Rail freight tkm (million tkm)	488747	199329	175330	180453	197227	230621	241968	233160	252147	276788	-43%	-3.29%
Road pkm/capita	1740.66	675.38	587.98	624.96	734.13	826.08	987.17	1099.98	1140.05	1195.47	-31%	-2.19%
Road and Rail freight tkm/\$ of GDP	1.07	0.91	0.88	0.83	0.86	0.92	0.87	0.81	0.82	0.83	-22%	-1.45%
Passenger cars per 1000 inhabitants	63	87	107	109	112	116	115	118	..	..	..	4.27%

CO2 Emissions

IEA CO ₂ from fuel combustion (Mt)*	693.97	393.25	292.74	297.09	299.84	330.65	313.72	307.13	311.28	315.02	-55%	-4.54%
... of which transport CO ₂ (Mt)*	60.41	33.5	27.46	28.96	30.33	30.01	32.02	31.43	31.06	33.03	-45%	-3.49%
<i>Transport* as a percentage of total</i>	8.7%	8.5%	9.4%	9.7%	10.1%	9.1%	10.2%	10.2%	10.0%	10.5%	..	..
Road (Mt)	46.95	24.15	19.12	20.49	21.79	20.77	21.95	21.15	21.67	23.56	-50%	-3.97%
Rail (Mt)	2.42	1.12	0.77	0.72	0.8	0.86	1.15	1.07	0.95	1.01	-58%	-5.01%
Domestic Aviation (Mt)	0	0.01	0.01	0.01	0.02	0.02	0.02	0.09	0.13	0.15	..	..
International Aviation (Mt)	6.11	0.47	0.78	0.74	0.89	1.1	1.11	1.11	0.99	1.06	-83%	-9.79%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0.41	0.44	0.42	..	..
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	4.93	7.74	6.78	7	6.84	7.27	7.79	7.6	6.88	6.85	39%	1.95%

GHG Emissions

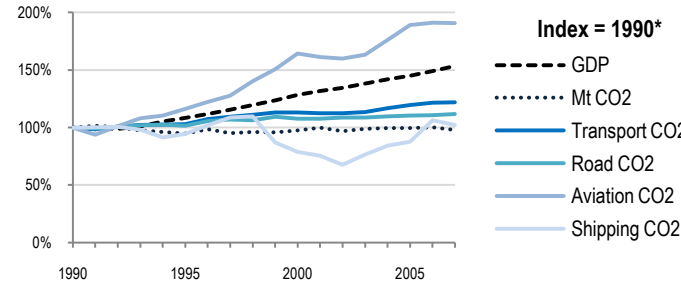
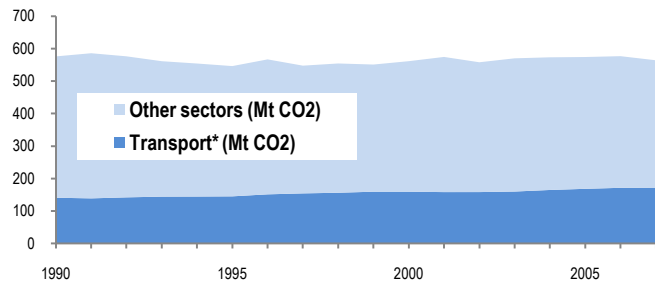
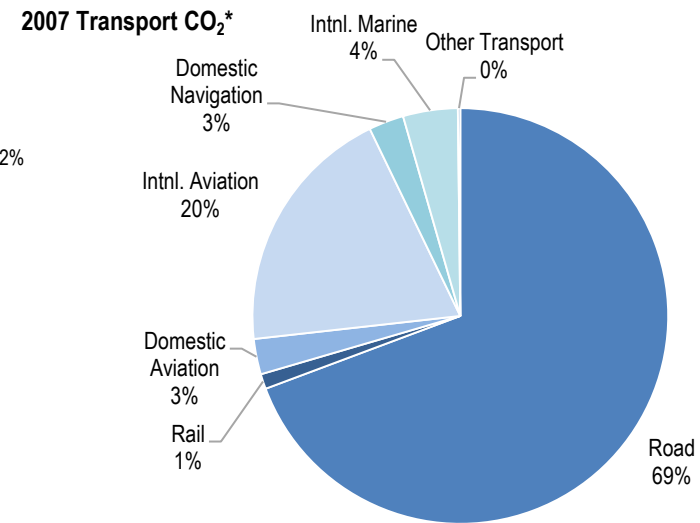
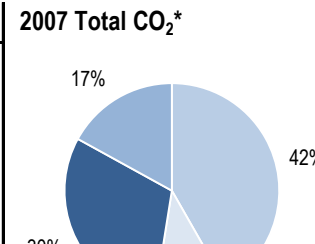
UNFCCC GHG emissions (Mt CO ₂ eq.)*	931.98	522.76	390.42	391.15	398.90	411.98	411.75	418.39	437.74	437.01	-53%	-4.36%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	604.63	334.80	219.05	220.99	224.16	237.45	233.81	242.76	254.23	249.25	-59%	-5.08%
... of which transport GHG (Mt CO ₂ eq.)*	93.61	0.76	35.08	35.71	38.64	38.84	41.57	43.55	44.70	45.47	-51%	-4.16%
Road (Mt)	46.68	0.00	16.42	18.20	21.51	21.67	24.09	26.35	28.10	30.30	-35%	-2.51%
International Aviation (Mt)	2.41	0.76	0.37	0.37	0.41	0.48	0.59	0.65	0.76	0.87	-64%	-5.83%
International Shipping (Mt)	3.54	0.00	0.34	0.37	0.22	0.15	0.19	0.21	0.21	0.14	-96%	-17.30%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

United Kingdom

EU-27 564.0 Mt N. America Asia-Pacific ITF-other Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-2%	564.03	-8%	9.28	-36%	0.31
Transport CO ₂	22%	171.94	15%	2.83	-21%	0.09
Road CO ₂	12%	119.17	5%	1.96	-27%	0.07
Aviation CO ₂	91%	38.44	80%	0.63	24%	0.02
Shipping CO ₂	2%	12.01	-4%	0.20	-34%	0.01



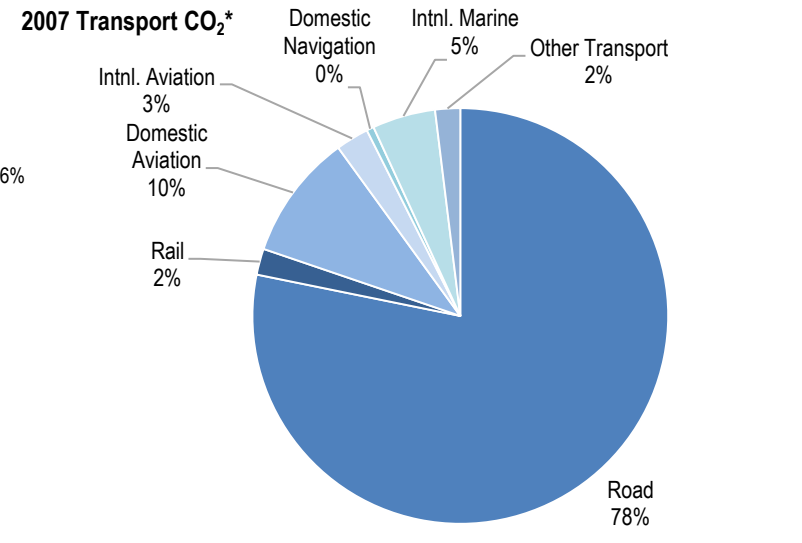
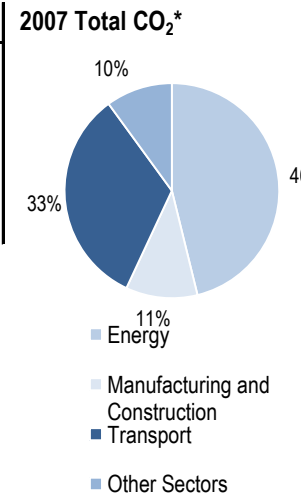
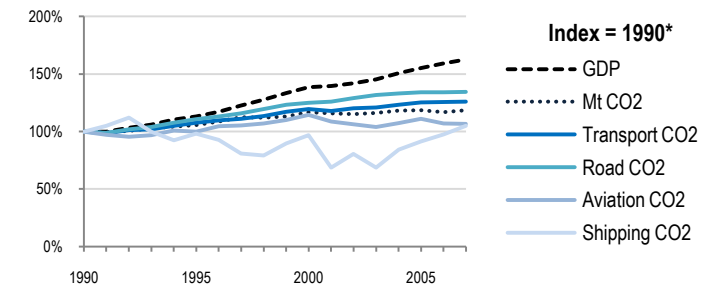
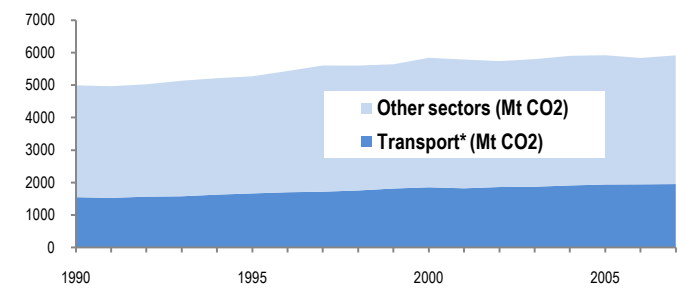
Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	57.24	58.03	58.89	59.11	59.32	59.55	59.83	60.22	60.59	60.78	6%	0.35%
GDP PPP (billion 2000 US dollars)	1194.02	1295.16	1533.45	1571.21	1604.15	1649.35	1694.84	1729.71	1778.80	1832.63	53%	2.55%
Road passenger km (million pkm)	633590	661200	686200	700440	723600	720400	726400	722500	731900	734800	16%	0.88%
Road and Rail freight tkm (million tkm)	148900	159986	171804	171540	172747	175730	182118	186868	191082	197151	32%	1.66%
Road pkm/capita	11069.01	11394.11	11652.23	11849.77	12198.25	12097.40	12141.07	11997.68	12079.55	12089.50	9%	0.52%
Road and Rail freight tkm/\$ of GDP	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	-14%	-0.87%
Passenger cars per 1000 inhabitants	341	352	388	433	446	440	451	457	..	..	..	1.97%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	575.95	546.14	561.24	574.24	557.89	570.04	573.11	574	576.68	564.03	-2%	-0.12%
... of which transport CO ₂ (Mt)*	141.04	145.24	159.53	158.33	158.36	160.07	164.85	168.38	171.5	171.94	22%	1.17%
Transport* as a percentage of total	24.5%	26.6%	28.4%	27.6%	28.4%	28.1%	28.8%	29.3%	29.7%	30.5%		
Road (Mt)	106.66	108.31	114.88	114.63	115.93	115.75	116.97	117.6	118.06	119.17	12%	0.65%
Rail (Mt)	1.93	1.88	1.83	1.9	1.9	1.91	2	2.02	2.08	2.01	4%	0.24%
Domestic Aviation (Mt)	5	3.95	3.82	3.99	4.2	4.23	4.43	4.73	4.84	4.74	-5%	-0.31%
International Aviation (Mt)	15.14	19.45	29.24	28.49	27.96	28.67	31.02	33.36	33.66	33.7	123%	4.82%
Domestic Navigation (Mt)	3.93	3.48	2.85	2.01	2.02	3.54	3.45	3.96	5.25	4.69	19%	1.05%
International Shipping (Mt)	7.84	7.62	6.44	6.88	5.93	5.46	6.45	6.34	7.26	7.32	-7%	-0.40%
Other Transport (Mt)	0.54	0.55	0.47	0.43	0.42	0.51	0.53	0.37	0.36	0.32	-41%	-3.03%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	812.71	763.13	744.30	746.99	723.29	729.46	733.61	733.17	730.55	718.11	-12%	-0.73%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	615.53	585.93	607.18	618.90	600.26	612.23	618.75	620.41	621.69	610.48	-1%	-0.05%
... of which transport GHG (Mt CO ₂ eq.)*	157.89	168.95	193.18	191.92	191.67	194.22	202.06	208.45	212.14	211.39	34%	1.73%
Road (Mt)	111.76	114.21	118.44	118.36	120.67	120.32	121.50	121.92	122.24	123.42	10%	0.59%
International Aviation (Mt)	31.72	40.75	61.22	59.71	58.59	60.02	65.71	70.88	72.00	70.63	123%	4.82%
International Shipping (Mt)	6.82	6.86	5.93	6.64	5.58	5.38	6.14	6.15	7.10	7.21	6%	0.32%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

United States



Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	18%	5915.46	-2%	19.58	-27%	0.52
Transport CO ₂	26%	1953.62	4%	6.47	-22%	0.17
Road CO ₂	34%	1527.58	11%	5.06	-17%	0.13
Aviation CO ₂	7%	241.3	-12%	0.80	-34%	0.02
Shipping CO ₂	5%	107	-13%	0.35	-35%	0.01



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	250.18	266.59	282.43	285.37	288.22	290.96	293.64	296.37	299.20	302.09	21%	1.12%
GDP PPP (billion 2000 US dollars)	7055.00	7972.80	9764.80	9838.90	9997.60	10249.80	10623.90	10936.70	11240.60	11468.00	63%	2.90%
Road passenger km (million pkm)	3866914	3899426	4353881	4355726	4450661	4483127	4564468	4582280	4530078	4486974	16%	0.88%
Road and Rail freight tkm (million tkm)	2748759	3415938	3881751	3954597	4018649	4111590	4298406	4362309	4472100	4507819	64%	2.95%
Road pkm/capita	15456.53	14627.05	15415.79	15263.43	15441.89	15408.05	15544.44	15461.35	15140.64	14853.10	-4%	-0.23%
Road and Rail freight tkm/\$ of GDP	0.39	0.43	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.39	1%	0.05%
Passenger cars and light trucks per 1000 inhabitants	752	753	782	805	794	793	805	811	813	815.75	8%	0.48%

CO2 Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
IEA CO ₂ from fuel combustion (Mt)*	4992.76	5269.8	5839.03	5785.85	5738	5798.59	5899.6	5918.31	5834.41	5915.46	18%	1.00%
... of which transport CO ₂ (Mt)*	1549.45	1665.97	1854.07	1822.91	1861.96	1871.18	1910.82	1939.84	1944.86	1953.62	26%	1.37%
Transport* as a percentage of total	31.0%	31.6%	31.8%	31.5%	32.4%	32.3%	32.4%	32.8%	33.3%	33.0%		
Road (Mt)	1137.81	1258.24	1421.4	1432.98	1468.29	1499.81	1514.16	1523.77	1526.76	1527.58	34%	1.75%
Rail (Mt)	32.07	32.31	30.53	29.71	30.9	31.04	33.17	37.04	41.25	39.74	24%	1.27%
Domestic Aviation (Mt)	187.51	180.35	201.74	193.99	190.11	185.52	192.46	198.87	193.91	191.11	2%	0.11%
International Aviation (Mt)	38.79	45.96	57.11	51.74	50.69	49.51	50.39	52.07	47.9	50.19	29%	1.53%
Domestic Navigation (Mt)	11.17	9.59	9.77	8.61	9.13	9.42	9.14	11.44	11.11	11.04	-1%	-0.07%
International Shipping (Mt)	90.68	90.51	88.9	61.37	72.88	60.49	76.78	81.76	88.16	95.96	6%	0.33%
Other Transport (Mt)	51.42	49.01	44.61	44.51	39.95	35.39	34.71	34.88	35.76	37.99	-26%	-1.76%

GHG Emissions	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
UNFCCC GHG emissions (Mt CO ₂ eq.)*	6200.04	6549.78	7075.20	6970.34	7016.68	7058.66	7163.11	7194.87	7117.72	7217.05	16%	0.90%
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	5021.49	5348.73	5901.28	5819.46	5870.70	5924.29	6017.40	6054.83	5969.24	6054.46	21%	1.11%
... of which transport GHG (Mt CO ₂ eq.)*	1598.92	1726.45	1927.05	1898.56	1939.77	1927.07	1987.33	2005.41	2003.96	2004.33	25%	1.34%
Road (Mt)	1225.36	1342.88	1513.55	1519.10	1555.90	1564.44	1598.87	1599.98	1595.76	1595.49	30%	1.56%
International Aviation (Mt)	46.95	51.79	58.35	58.85	63.93	56.25	61.47	57.06	55.18	53.34	14%	0.75%
International Shipping (Mt)	68.60	50.91	41.67	39.24	41.81	45.21	54.60	55.59	56.49	56.55	-18%	-1.13%

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

REDUCING TRANSPORT GHG EMISSIONS - Trends & Data 2010. © OECD/ITF 2010

TOP 10 CO₂-EMITTING NON-ITF ECONOMIES

Country Sheets

China (including Hong Kong)

EU-27

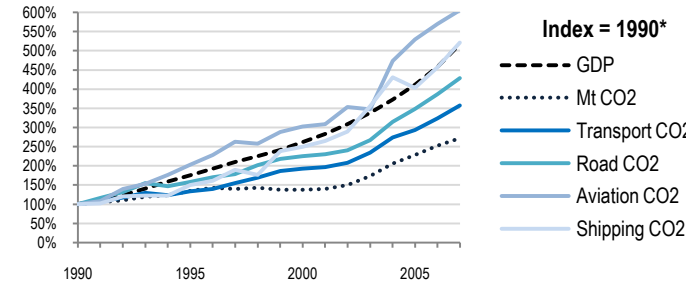
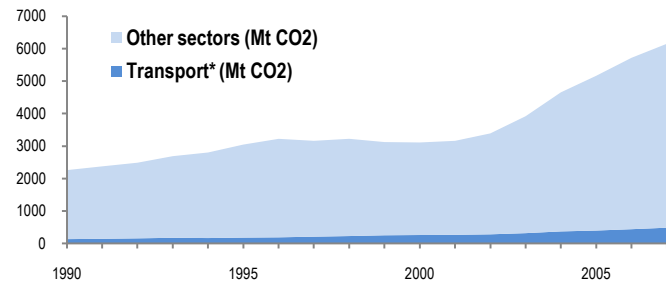
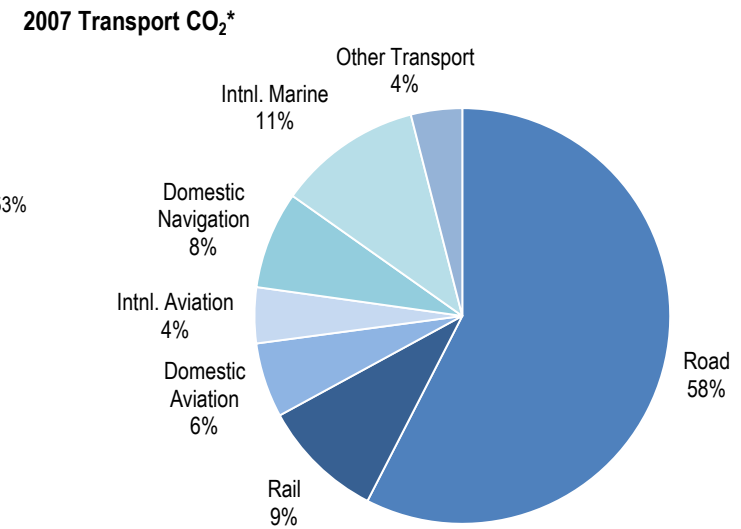
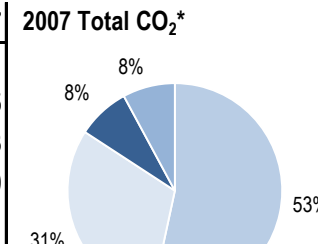
N. America

Asia-Pacific

ITF-other

Top 10 non-ITF

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	172%	6147.03	134%	4.63	-47%	0.61
Transport CO ₂	258%	487.44	208%	0.37	-31%	0.05
Road CO ₂	328%	280.47	268%	0.21	-17%	0.03
Aviation CO ₂	505%	49.52	421%	0.04	17%	0.00
Shipping CO ₂	421%	91.6	348%	0.07	1%	0.01



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	1140.89	1211.01	1269.31	1278.56	1287.14	1295.16	1302.95	1311.31	1318.66	1326.91	16%	0.89%
GDP PPP (billion 2000 US dollars)	1964.86	3444.79	5150.25	5564.06	6057.61	6650.84	7319.56	8074.15	9000.93	10155.84	417%	10.14%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	1	3	7	..	8	10	12	15	18	..	..	19.80%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	2259.24	3045.75	3110.71	3160.32	3389.61	3918.51	4653.5	5162.18	5715.4	6147.03	172%	6.06%
... of which transport CO ₂ (Mt)*	136.27	182.56	262.5	268.13	283.88	320.09	373.32	400.42	441.34	487.44	258%	7.79%
Transport* as a percentage of total	6.0%	6.0%	8.4%	8.5%	8.4%	8.2%	8.0%	7.8%	7.7%	7.9%	..	..
Road (Mt)	65.5	103.7	147.68	150.8	157.74	175.15	206.04	228.02	253.6	280.47	328%	8.93%
Rail (Mt)	44.77	35.59	45.68	45.06	46.31	52.77	40.75	43.86	44.33	46.42	4%	0.21%
Domestic Aviation (Mt)	2.06	6.43	14.31	14.16	15.48	15.71	20.78	22.42	25.33	28.37	1277%	16.68%
International Aviation (Mt)	6.12	10.2	10.43	11.11	13.47	12.73	17.93	20.9	21.31	21.15	246%	7.57%
Domestic Navigation (Mt)	8.48	12.53	21.27	22.11	22.94	28.58	26.56	28.76	31.61	36.95	336%	9.04%
International Shipping (Mt)	9.11	13.77	22.71	24.43	27.88	33.99	49.15	42.23	48.86	54.65	500%	11.11%
Other Transport (Mt)	0.22	0.35	0.42	0.46	0.06	1.17	12.12	14.23	16.29	19.43	8732%	30.16%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Brazil

EU-27

N. America

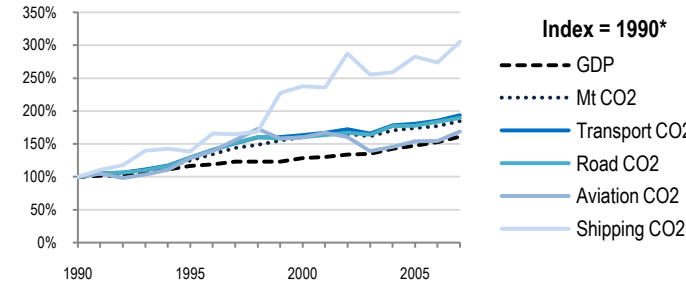
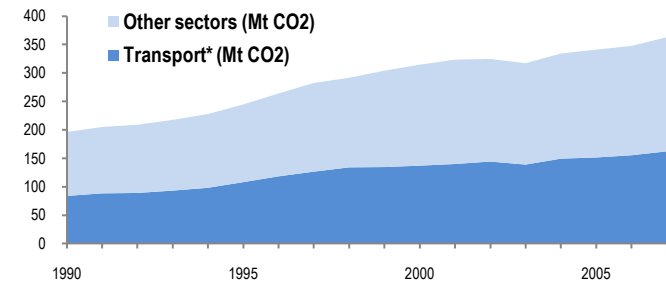
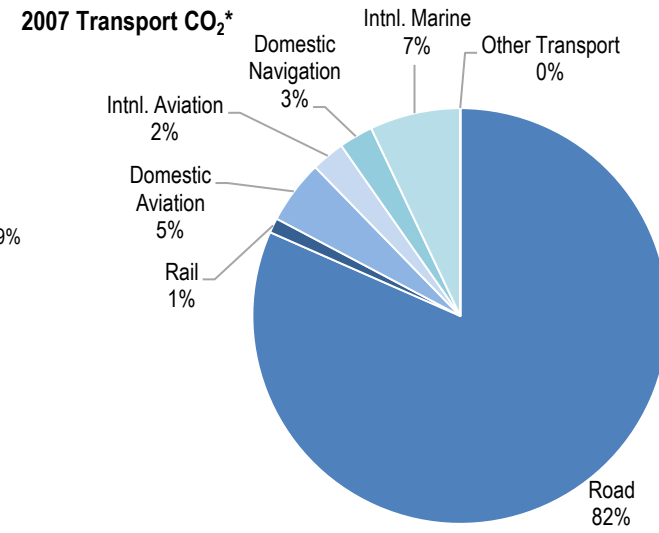
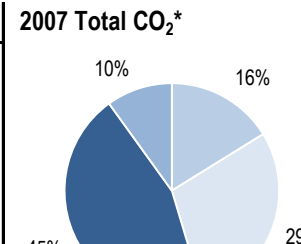
Asia-Pacific

ITF-other

Top 10 non-ITF

362.7 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	85%	362.73	44%	1.89	15%	0.23
Transport CO ₂	94%	162.08	51%	0.85	20%	0.10
Road CO ₂	90%	132.26	48%	0.69	18%	0.08
Aviation CO ₂	69%	12.23	32%	0.06	5%	0.01
Shipping CO ₂	205%	15.73	138%	0.08	89%	0.01



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	149.52	161.62	174.16	176.70	179.25	181.79	184.32	186.83	189.32	191.60	28%	1.47%
GDP PPP (billion 2000 US dollars)	968.41	1126.39	1244.26	1260.57	1294.08	1308.92	1383.74	1427.44	1481.03	1561.26	61%	2.85%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	..	..	134	..	..	131	136	..	..	..	..	0.37%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	196.17	244.65	314.56	323.42	324.5	317.15	334.18	341.06	347.53	362.73	85%	3.68%
... of which transport CO ₂ (Mt)*	83.75	108.01	137	139.89	144.19	138.86	149.27	151.4	155.26	162.08	94%	3.96%
Transport* as a percentage of total	42.7%	44.1%	43.6%	43.3%	44.4%	43.8%	44.7%	44.4%	44.7%	44.7%		
Road (Mt)	69.76	90.28	111.94	114.22	116.37	114.23	123.65	123.94	128.19	132.26	90%	3.83%
Rail (Mt)	1.6	1.33	1.25	1.42	1.41	1.42	1.73	1.75	1.78	1.86	16%	0.89%
Domestic Aviation (Mt)	5.83	7.22	9.56	9.61	9.42	6.71	7.21	7.79	7.31	8.03	38%	1.90%
International Aviation (Mt)	1.41	2.06	2.03	2.49	2.2	3.35	3.35	3.35	3.87	4.2	198%	6.63%
Domestic Navigation (Mt)	3.43	3.48	2.96	3.19	3.32	3.06	3.25	3.61	3.48	4.29	25%	1.32%
International Shipping (Mt)	1.72	3.64	9.27	8.96	11.47	10.08	10.08	10.96	10.63	11.44	565%	11.79%
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Chinese Taipei

EU-27

N. America

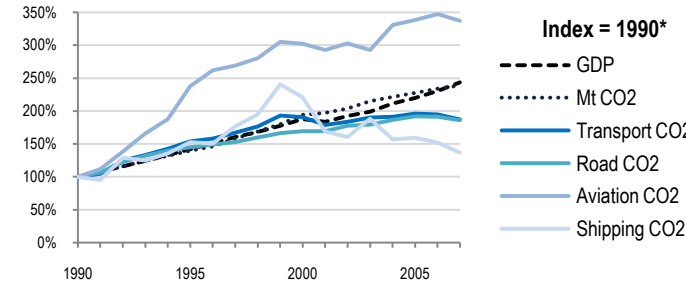
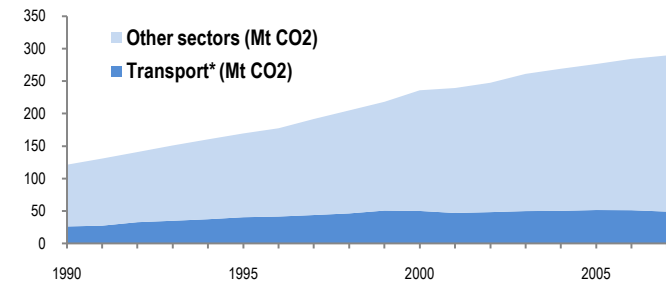
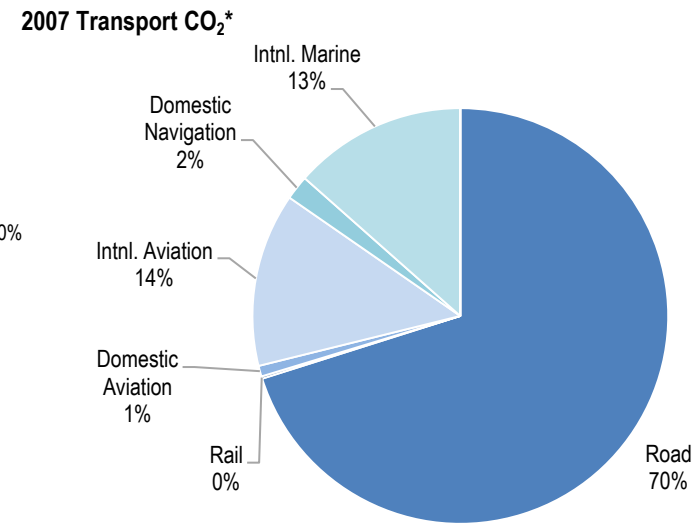
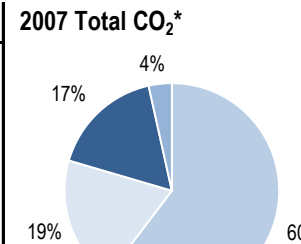
Asia-Pacific

ITF-other

Top 10 non-ITF

289.4 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	139%	289.44	112%	12.66	-2%	0.45
Transport CO ₂	87%	49.17	66%	2.15	-23%	0.08
Road CO ₂	86%	34.47	65%	1.51	-24%	0.05
Aviation CO ₂	237%	7.05	199%	0.31	39%	0.01
Shipping CO ₂	37%	7.55	21%	0.33	-44%	0.01



Transport and the Economy

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	20.28	21.29	22.18	22.34	22.45	22.54	22.62	22.70	22.78	22.86	13%	0.71%
GDP PPP (billion 2000 US dollars)	261.44	370.83	491.35	480.69	502.99	520.60	552.62	575.11	602.02	636.32	143%	5.37%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	..	..	..	..	..	..	..	..	..	..	..	..

CO2 Emissions

IEA CO ₂ from fuel combustion (Mt)*	121.31	169.44	235.83	239.31	247.42	261.08	268.97	276.22	284.15	289.44	139%	5.25%
... of which transport CO ₂ (Mt)*	26.29	40.52	50.13	47.01	48.33	49.96	50.3	51.57	51.3	49.17	87%	3.75%
<i>Transport* as a percentage of total</i>	21.7%	23.9%	21.3%	19.6%	19.5%	19.1%	18.7%	18.7%	18.1%	17.0%		
Road (Mt)	18.55	26.96	31.47	31.45	33	33.33	34.6	35.57	35.52	34.47	86%	3.71%
Rail (Mt)	0.13	0.14	0.12	0.12	0.12	0.11	0.1	0.1	0.1	0.09	-31%	-2.14%
Domestic Aviation (Mt)	0.3	0.88	0.94	0.86	0.79	0.66	0.67	0.62	0.54	0.41	37%	1.85%
International Aviation (Mt)	1.79	4.09	5.38	5.26	5.54	5.46	6.24	6.46	6.72	6.64	271%	8.02%
Domestic Navigation (Mt)	0.67	0.88	1.2	1.34	1.18	0.95	1.05	1.1	1.03	0.93	39%	1.95%
International Shipping (Mt)	4.86	7.57	11.02	7.98	7.69	9.45	7.64	7.72	7.39	6.62	36%	1.83%
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..

GHG Emissions

UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Indonesia

EU-27

N. America

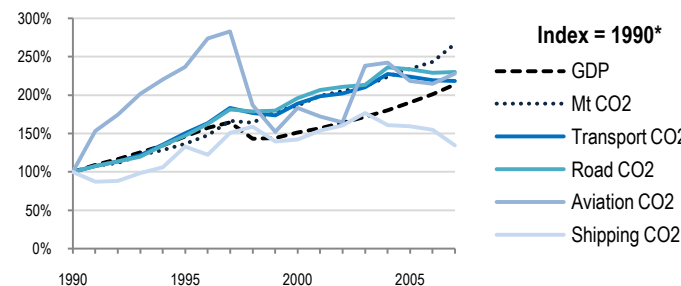
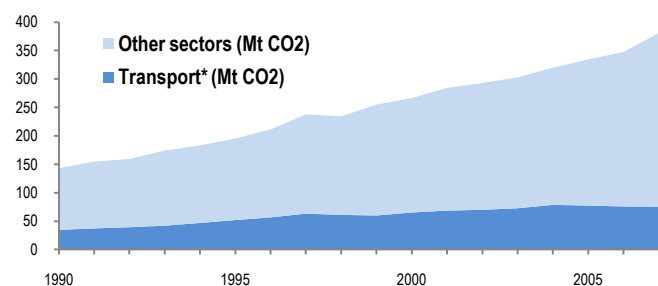
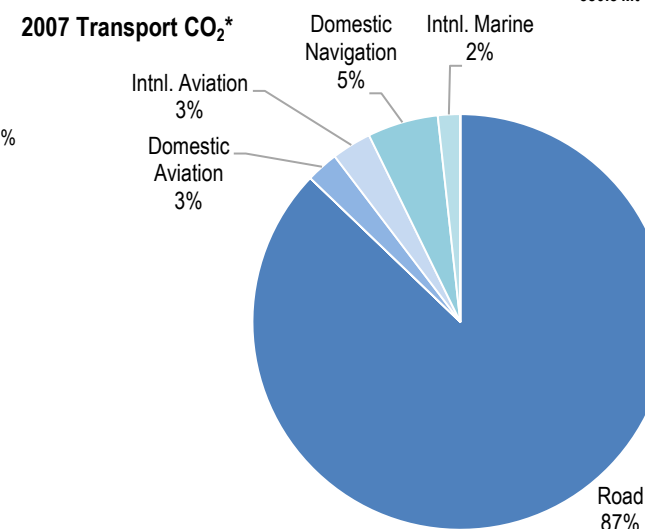
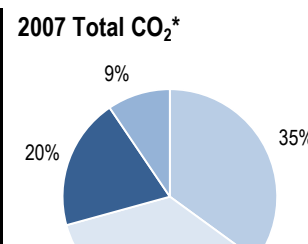
Asia-Pacific

ITF-other

Top 10 non-ITF

380.8 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	167%	380.82	111%	1.69	25%	0.45
Transport CO ₂	119%	75.43	73%	0.33	2%	0.09
Road CO ₂	130%	65.75	82%	0.29	8%	0.08
Aviation CO ₂	128%	4.22	80%	0.02	7%	0.00
Shipping CO ₂	34%	5.46	6%	0.02	-37%	0.01



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	178.23	192.75	206.27	209.01	211.82	214.67	217.59	220.56	223.04	225.63	27%	1.40%
GDP PPP (billion 2000 US dollars)	396.38	578.79	599.27	621.10	649.05	680.07	714.29	754.95	796.55	846.86	114%	4.57%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	7	11	..	..	..	..	..	..	..	..	..	..
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	142.86	195.28	266.5	284.2	292.97	302.84	319.83	334.34	347.38	380.82	167%	5.94%
... of which transport CO ₂ (Mt)*	34.51	51.81	65.18	68.52	69.82	72.64	78.57	77.27	75.78	75.43	119%	4.71%
Transport* as a percentage of total	24.2%	26.5%	24.5%	24.1%	23.8%	24.0%	24.6%	23.1%	21.8%	19.8%		
Road (Mt)	28.6	42.03	56.01	59.09	60.26	61.05	67.56	66.76	65.52	65.75	130%	5.02%
Rail (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0.89	2.6	1.87	1.63	1.39	1.93	2.05	1.81	1.78	1.89	112%	4.53%
International Aviation (Mt)	0.96	1.78	1.52	1.55	1.65	2.48	2.43	2.23	2.19	2.33	143%	5.35%
Domestic Navigation (Mt)	2.38	4.12	5.41	5.98	5.93	5.65	5.41	5.3	5.06	4.15	74%	3.32%
International Shipping (Mt)	1.68	1.28	0.36	0.27	0.59	1.53	1.12	1.17	1.23	1.31	-22%	-1.45%
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

REDUCING TRANSPORT GHG EMISSIONS - Trends & Data 2010. © OECD/ITF 2010

Islamic Republic of Iran

EU-27

N. America

Asia-Pacific

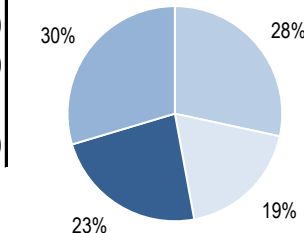
ITF-other

Top 10 non-ITF

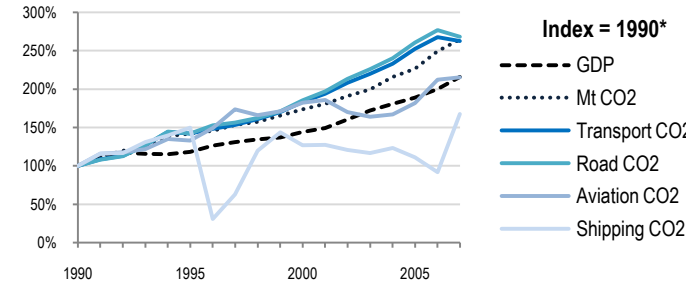
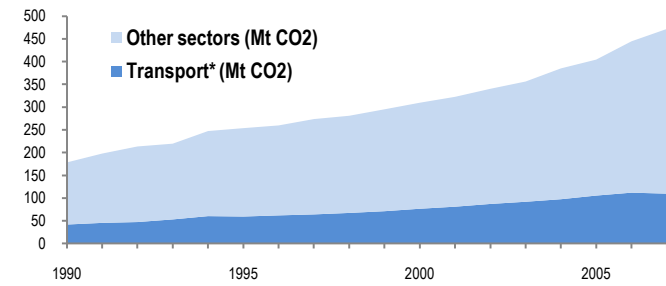
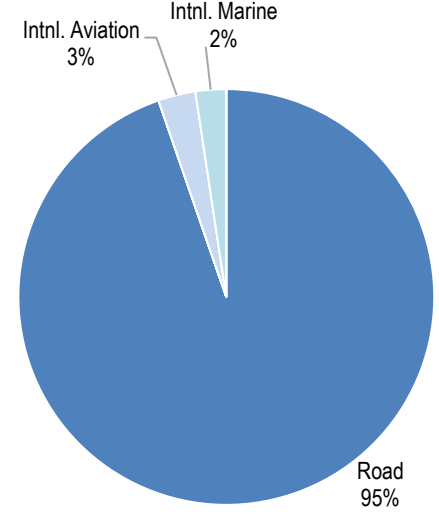
471.7 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	164%	471.7	103%	6.64	22%	0.85
Transport CO ₂	163%	109.71	101%	1.54	22%	0.20
Road CO ₂	168%	103.91	105%	1.46	24%	0.19
Aviation CO ₂	116%	3.19	65%	0.04	0%	0.01
Shipping CO ₂	67%	2.61	28%	0.04	-23%	0.00

2007 Total CO₂*



2007 Transport CO₂*



Transport and the Economy

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	54.40	58.95	63.94	64.98	66.01	67.04	68.07	69.09	70.10	71.02	31%	1.58%
GDP PPP (billion 2000 US dollars)	256.54	303.18	369.66	383.22	412.02	441.34	463.77	485.22	513.81	554.02	116%	4.63%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	25	29	18	19	24	..	..	..	..	..	..	-0.34%

CO2 Emissions

IEA CO ₂ from fuel combustion (Mt)*	178.35	253.66	309.53	322.5	340.16	356.12	384.96	404.34	444.53	471.7	164%	5.89%
... of which transport CO ₂ (Mt)*	41.79	59.36	76.51	81.03	87.03	91.84	97.43	105.45	111.88	109.71	163%	5.84%
<i>Transport* as a percentage of total</i>	23.4%	23.4%	24.7%	25.1%	25.6%	25.8%	25.3%	26.1%	25.2%	23.3%		
Road (Mt)	38.75	55.05	71.83	76.29	82.63	87.59	93.04	101.03	107.31	103.91	168%	5.97%
Rail (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	1.48	1.97	2.7	2.75	2.52	2.43	2.47	2.69	3.14	3.19	116%	4.62%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	1.56	2.34	1.98	1.99	1.88	1.82	1.92	1.73	1.43	2.61	67%	3.07%
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..

GHG Emissions

UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Kazakhstan

EU-27

N. America

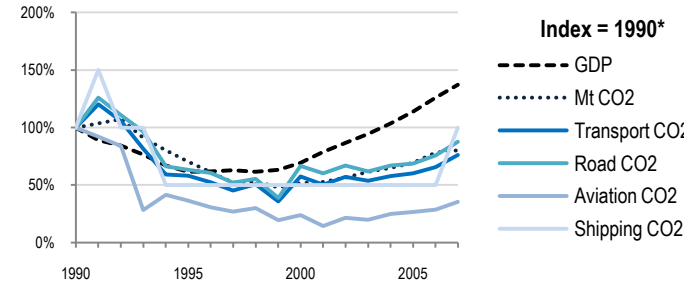
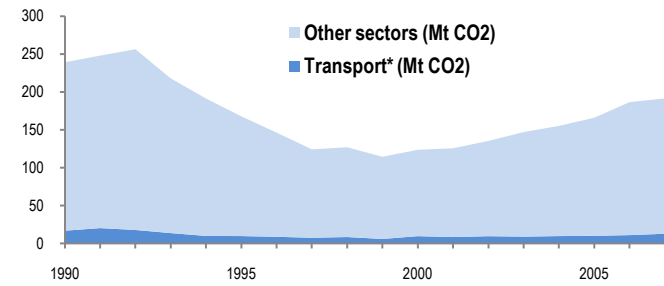
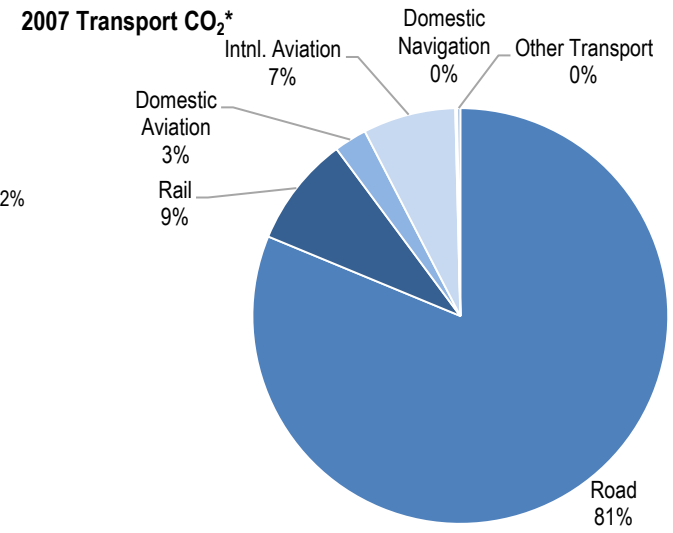
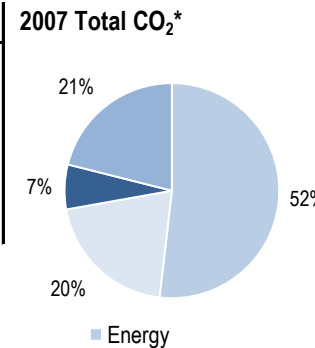
Asia-Pacific

ITF-other

Top 10 non-ITF

191.4 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	-20%	191.38	-15%	12.36	-42%	1.50
Transport CO ₂	-24%	12.9	-20%	0.83	-45%	0.10
Road CO ₂	-12%	10.48	-7%	0.68	-36%	0.08
Aviation CO ₂	-65%	1.26	-63%	0.08	-74%	0.01
Shipping CO ₂	0%	0.02	6%	0.00	-27%	0.00



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	16.35	15.82	14.88	14.86	14.86	14.91	15.01	15.15	15.31	15.48	-5%	-0.32%
GDP PPP (billion 2000 US dollars)	93.16	57.20	64.67	73.40	80.60	88.09	96.55	105.91	117.25	127.68	37%	1.87%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	50	64	67	71	72	77	80	93	114	..	..	5.29%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	239.09	167.8	123.67	125.68	135.27	146.98	155.18	165.89	186.5	191.38	-20%	-1.30%
... of which transport CO ₂ (Mt)*	16.96	9.84	9.74	8.56	9.7	9.12	9.83	10.2	11.11	12.9	-24%	-1.60%
Transport* as a percentage of total	7.1%	5.9%	7.9%	6.8%	7.2%	6.2%	6.3%	6.1%	6.0%	6.7%	..	..
Road (Mt)	11.95	7.56	7.94	7.18	7.99	7.4	8	8.21	9.07	10.48	-12%	-0.77%
Rail (Mt)	1.41	0.97	0.92	0.82	0.91	0.97	0.9	0.98	0.97	1.11	-21%	-1.40%
Domestic Aviation (Mt)	0.89	0.52	0.51	0.15	0.21	0.19	0.24	0.25	0.27	0.33	-63%	-5.67%
International Aviation (Mt)	2.68	0.78	0.34	0.37	0.56	0.52	0.65	0.7	0.75	0.93	-65%	-6.04%
Domestic Navigation (Mt)	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0%	0.00%
International Shipping (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Other Transport (Mt)	0	0	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.03	..	5.96%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Malaysia

EU-27

N. America

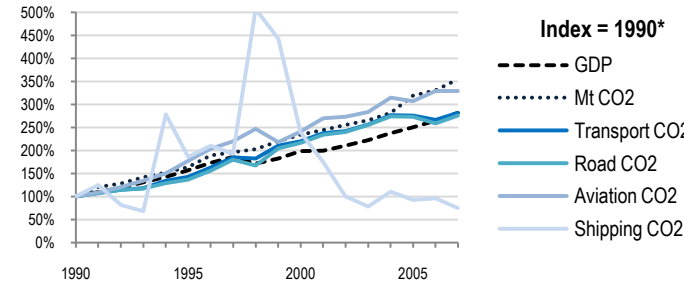
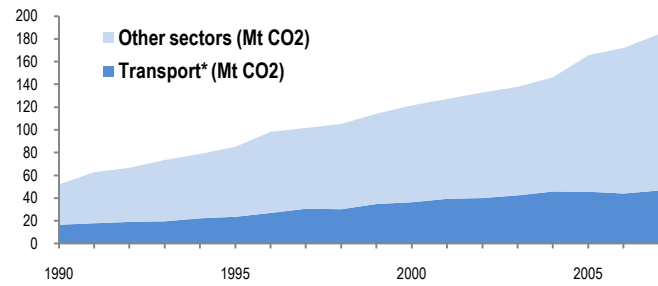
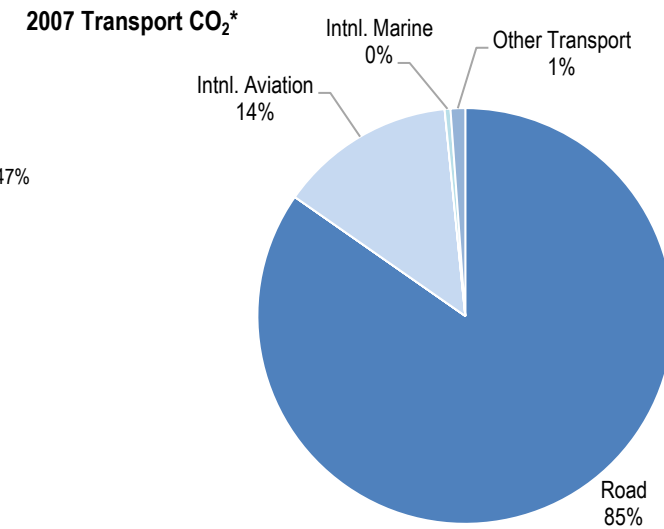
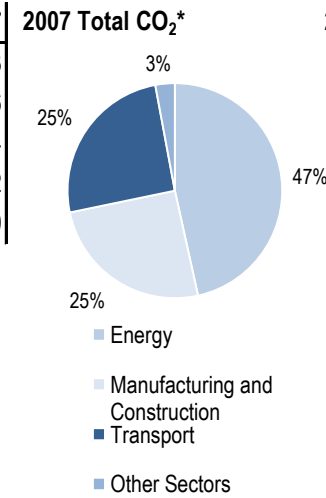
Asia-Pacific

ITF-other

Top 10 non-ITF

184.0 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	254%	183.98	142%	6.93	26%	0.63
Transport CO ₂	182%	46.61	92%	1.76	0%	0.16
Road CO ₂	176%	39.48	88%	1.49	-2%	0.14
Aviation CO ₂	229%	6.39	125%	0.24	17%	0.02
Shipping CO ₂	-25%	0.21	-49%	0.01	-73%	0.00



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	18.10	20.59	23.27	23.78	24.26	24.73	25.19	25.65	26.11	26.55	47%	2.28%
GDP PPP (billion 2000 US dollars)	103.05	162.02	204.74	205.80	216.89	229.45	245.01	258.08	272.98	290.31	182%	6.28%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	101	127	183	197	211	225	..	..	..	..	..	6.36%
CO₂ Emissions												
IEA CO ₂ from fuel combustion (Mt)*	51.91	85.02	121.46	127.1	132.76	137.78	146.12	165.6	171.97	183.98	254%	7.73%
... of which transport CO ₂ (Mt)*	16.52	23.53	36.29	39.29	39.98	42.36	45.72	45.58	43.97	46.61	182%	6.29%
Transport* as a percentage of total	31.8%	27.7%	29.9%	30.9%	30.1%	30.7%	31.3%	27.5%	25.6%	25.3%	..	..
Road (Mt)	14.3	19.57	30.94	33.54	34.33	36.55	39.18	39.13	37.04	39.48	176%	6.16%
Rail (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	1.94	3.44	4.67	5.23	5.3	5.5	6.1	5.96	6.38	6.39	229%	7.26%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	0.28	0.52	0.67	0.49	0.28	0.22	0.31	0.26	0.27	0.21	-25%	-1.68%
Other Transport (Mt)	0	0	0.01	0.03	0.07	0.09	0.13	0.22	0.28	0.53	..	76.33%
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*
Road (Mt)
International Aviation (Mt)
International Shipping (Mt)

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Saudi Arabia

EU-27

N. America

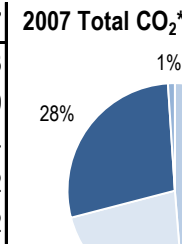
Asia-Pacific

ITF-other

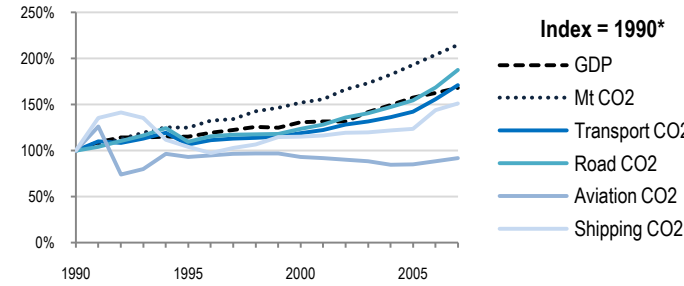
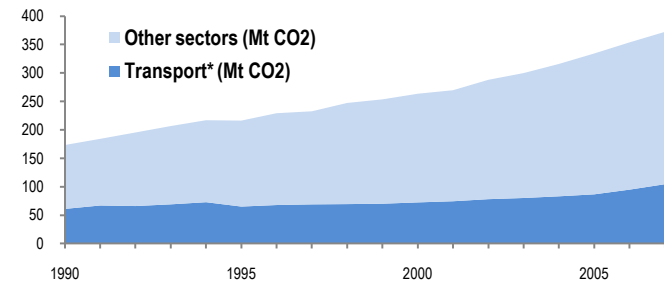
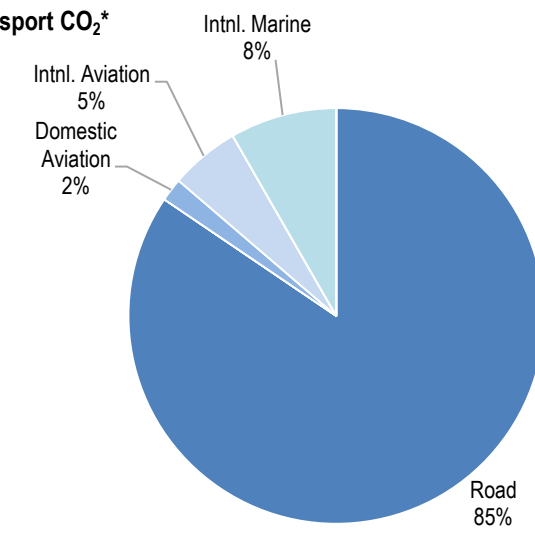
Top 10 non-ITF

372.2 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	115%	372.2	45%	15.38	28%	1.03
Transport CO ₂	71%	104.28	16%	4.31	2%	0.29
Road CO ₂	87%	88.1	27%	3.64	12%	0.24
Aviation CO ₂	-8%	7.52	-38%	0.31	-45%	0.02
Shipping CO ₂	51%	8.66	2%	0.36	-10%	0.02



2007 Transport CO₂*



Transport and the Economy

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	16.38	18.51	20.66	21.12	21.59	22.05	22.53	23.12	23.68	24.20	48%	2.32%
GDP PPP (billion 2000 US dollars)	214.80	247.40	280.85	282.39	282.75	304.40	320.44	338.23	348.91	360.74	68%	3.10%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	98	94	375	383	397	407	415	..	..	..	..	10.86%

CO2 Emissions

IEA CO ₂ from fuel combustion (Mt)*	173.29	216.2	263.44	269.62	287.91	299.77	315.84	334.23	353.74	372.2	115%	4.60%
... of which transport CO ₂ (Mt)*	60.93	65.05	72.38	74.4	78.06	80.08	83.07	86.55	94.76	104.28	71%	3.21%
<i>Transport* as a percentage of total</i>	35.2%	30.1%	27.5%	27.6%	27.1%	26.7%	26.3%	25.9%	26.8%	28.0%		
Road (Mt)	47	51.48	58.15	60.2	63.85	65.97	69.14	72.5	79.25	88.1	87%	3.77%
Rail (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
Domestic Aviation (Mt)	2.05	1.9	1.91	1.88	1.84	1.81	1.73	1.74	1.81	1.88	-8%	-0.51%
International Aviation (Mt)	6.14	5.71	5.72	5.64	5.53	5.43	5.2	5.22	5.43	5.64	-8%	-0.50%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	5.74	5.96	6.6	6.68	6.84	6.87	7	7.09	8.27	8.66	51%	2.45%
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..

GHG Emissions

UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

South Africa

EU-27

N. America

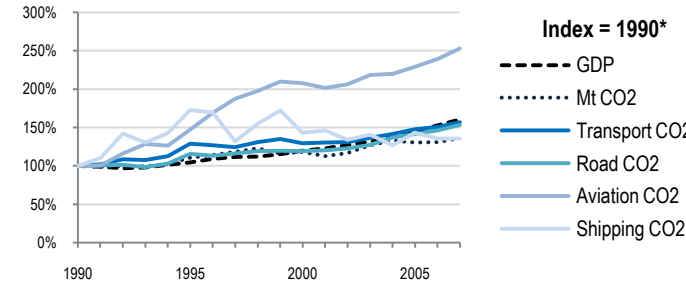
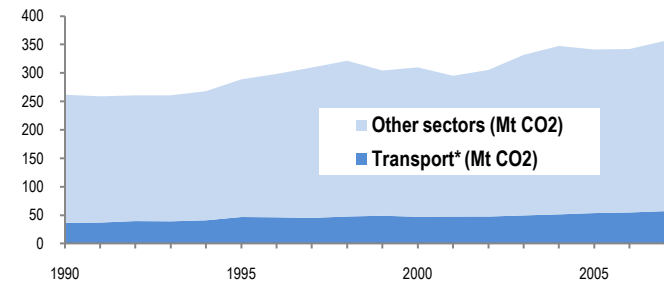
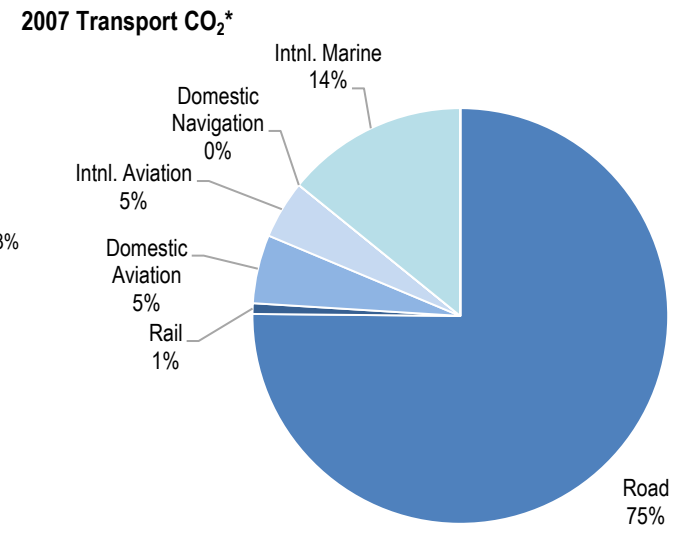
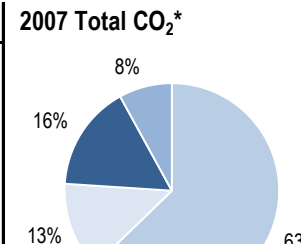
Asia-Pacific

ITF-other

Top 10 non-ITF

356.4 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	36%	356.41	1%	7.49	-15%	0.69
Transport CO ₂	57%	56.94	16%	1.20	-2%	0.11
Road CO ₂	53%	42.8	13%	0.90	-4%	0.08
Aviation CO ₂	153%	5.62	87%	0.12	58%	0.01
Shipping CO ₂	35%	8.06	0%	0.17	-16%	0.02



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	35.20	39.12	44.00	44.81	45.25	45.80	46.35	46.89	47.39	47.59	35%	1.79%
GDP PPP (billion 2000 US dollars)	321.98	336.11	385.64	396.19	410.72	423.53	444.13	466.34	491.47	516.63	60%	2.82%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	97	97	87	87	92	..	93	98	103	..	..	0.38%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	261.71	288.77	309.8	295.04	305.24	331.75	347.41	341.24	342.11	356.41	36%	1.83%
... of which transport CO ₂ (Mt)*	36.28	46.68	46.96	47.39	47.47	49.45	51.3	53.57	54.64	56.94	57%	2.69%
Transport* as a percentage of total	13.9%	16.2%	15.2%	16.1%	15.6%	14.9%	14.8%	15.7%	16.0%	16.0%	..	..
Road (Mt)	27.93	32.3	33.25	33.64	34.29	35.63	38.32	39.57	40.83	42.8	53%	2.54%
Rail (Mt)	0.18	0.8	0.57	0.55	0.64	0.6	0.53	0.39	0.43	0.47	161%	5.81%
Domestic Aviation (Mt)	1.13	1.69	1.82	1.88	2.01	2.32	2.6	2.88	2.87	3.04	169%	5.99%
International Aviation (Mt)	1.09	1.58	2.79	2.6	2.57	2.53	2.28	2.21	2.44	2.58	137%	5.20%
Domestic Navigation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Shipping (Mt)	5.95	10.28	8.51	8.71	7.96	8.37	7.56	8.52	8.07	8.06	35%	1.80%
Other Transport (Mt)	0	0.02	0.02	0	0	0	0	0	0	0	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

Thailand

EU-27

N. America

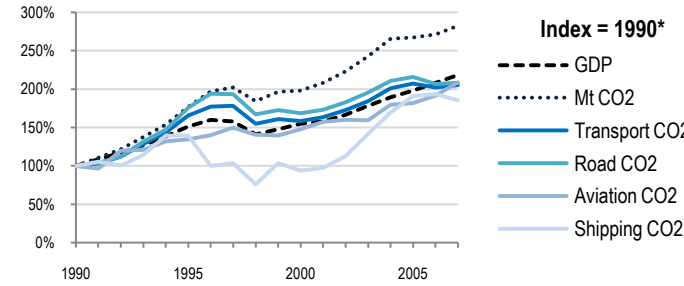
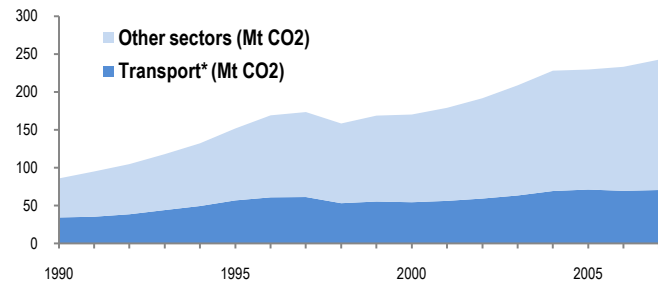
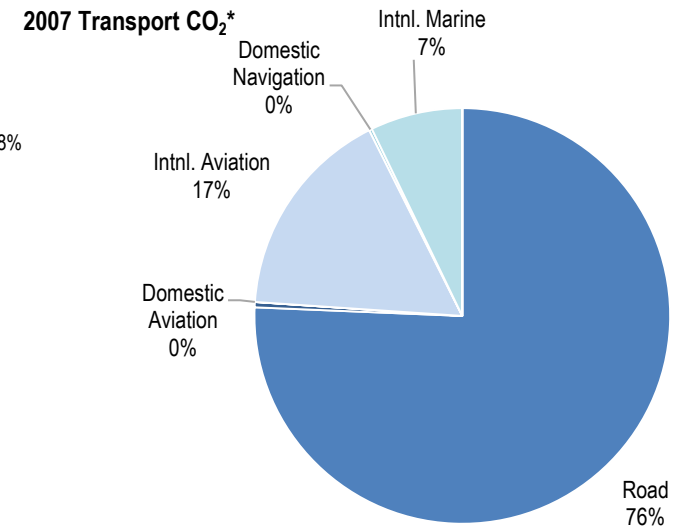
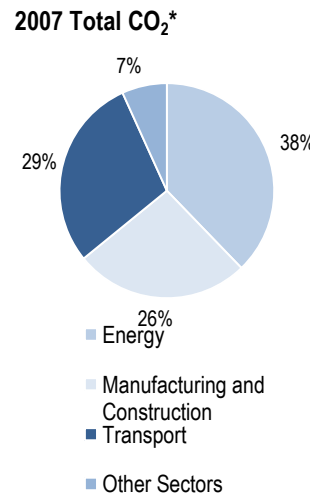
Asia-Pacific

ITF-other

Top 10 non-ITF

242.5 Mt

Change 1990-2007*	Mt	2007	T/capita	2007	Kg/\$2000 PPP	2007
Total CO ₂	182%	242.48	140%	3.80	29%	0.44
Transport CO ₂	105%	70.59	74%	1.11	-6%	0.13
Road CO ₂	108%	53.41	77%	0.84	-5%	0.10
Aviation CO ₂	109%	11.67	78%	0.18	-4%	0.02
Shipping CO ₂	85%	5.22	57%	0.08	-15%	0.01



Transport and the Economy	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	1990-2007	% per year**
Population (millions)	54.29	57.52	60.67	61.19	61.68	62.13	62.57	63.00	63.44	63.83	18%	0.96%
GDP PPP (billion 2000 US dollars)	251.14	379.77	388.38	396.79	417.89	447.73	476.14	497.68	523.10	547.96	118%	4.70%
Road passenger km (million pkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm (million tkm)	..	..	..	..	..	..	..	..	..	..	..	..
Road pkm/capita	..	..	..	..	..	..	..	..	..	..	..	..
Road and Rail freight tkm/\$ of GDP	..	..	..	..	..	..	..	..	..	..	..	..
Passenger cars per 1000 inhabitants	14	25	43	46	52	54	..	..	..	..	..	10.94%
CO2 Emissions												
IEA CO ₂ from fuel combustion (Mt)*	85.88	151.79	170.19	178.99	191.63	208.66	228.01	229.5	233.1	242.48	182%	6.30%
... of which transport CO ₂ (Mt)*	34.41	56.92	54.48	56.28	59.34	63.37	69.27	71.22	69.5	70.59	105%	4.32%
Transport* as a percentage of total	40.1%	37.5%	32.0%	31.4%	31.0%	30.4%	30.4%	31.0%	29.8%	29.1%	..	..
Road (Mt)	25.67	45.13	43.27	44.43	46.87	50.14	54.15	55.36	53.04	53.41	108%	4.40%
Rail (Mt)	0.32	0.35	0.3	0.31	0.36	0.33	0.29	0.3	0.3	0.29	-9%	-0.58%
Domestic Aviation (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
International Aviation (Mt)	5.59	7.51	8.27	8.8	8.94	8.91	10.05	10.17	10.7	11.67	109%	4.42%
Domestic Navigation (Mt)	1.12	0.91	0.18	0.18	0.2	0.22	0.25	0.21	0.2	0.16	-86%	-10.82%
International Shipping (Mt)	1.7	3.02	2.46	2.56	2.97	3.77	4.53	5.18	5.26	5.06	198%	6.63%
Other Transport (Mt)	0	0	0	0	0	0	0	0	0	0	..	..
GHG Emissions												
UNFCCC GHG emissions (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
UNFCCC GHG fuel combustion (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
... of which transport GHG (Mt CO ₂ eq.)*	..	..	..	..	..	..	..	..	..	..	..	..
Road (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Aviation (Mt)	..	..	..	..	..	..	..	..	..	..	..	..
International Shipping (Mt)	..	..	..	..	..	..	..	..	..	..	..	..

* includes emissions from international aviation and international maritime bunkers - there is no internationally agreed allocation mechanism for these and totals here are indicative of the scale of these emissions, not of their national "ownership" ** available yrs.

