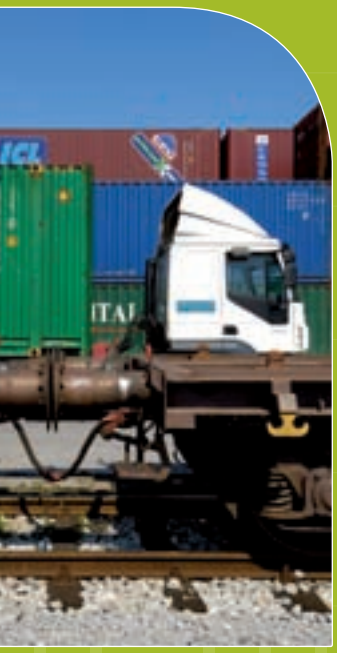
International Union of
combined Road-Rail
transport companies



TRAIN TO COPENHAGEN 05.12.2009

CO_2 Reduction through Combined Transport

FACTS

Under the Kyoto Protocol (1997), the European Union marked a strong commitment to reduce the emissions of greenhouse gases, including CO_2, by 8% in 2008/2012 compared to their 1990 level.

Where the general amount of GHG emissions achieved in 2006 by the EU27 was 7.3% below that of 1990, only a 3.1% reduction was attained in respect of the leading component CO_2.

Reducing transport's impact on this particularly harmful aspect of environment deterioration must more than ever be a key issue for the European Authorities.

All economic sectors contributed to a reduced exhaust of this component except transport which actually generated over 26% more of such emissions increasing its relative share by 30%.

Breakdown per transport mode illustrates that road still accounts for an overwhelming 71% of CO_2 originating from transport activities, as a consequence of its emissions having increased over the period under review by 28%.

POLICY OPTIONS

Projections for the immediate years to come anticipate a considerable increase in transport needs, especially in freight as a consequence of globalisation of the economies and derived trade facilitation and upswing, for which a 50% rise is seen as a realistic expectation between now and 2018.

Under such circumstances, targeting a reduction in demand for goods transportation services (decoupling) is less then ever a feasible option.

But decoupling of CO_2 emissions from demand for transports is perfectly possible through a different modal split, bringing about a significant relief of the environmental burden attributable to transport, whereby a more sustained recourse to Combined Transport is acceptedly the most obvious and overall beneficial way to reach this.

COMBINED TRANSPORT

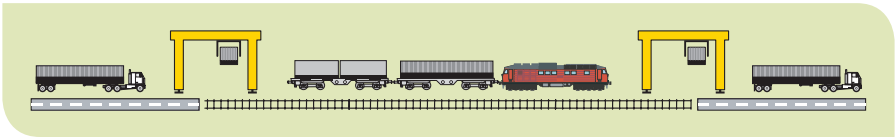
The taking into account of the regulatory conditions attached to Combined Transport in order to benefit from the advantages attached to it guarantees that with this transport technique the segment(s) of a total journey carried out by the most polluting mode, road, is (are) restricted to minimum required distances.

The officially applicable definition of CT says indeed that it is "intermodal transport where the major part of the journey is by rail, inland waterway or sea and any initial and/or final legs carried out by road are as short as possible".

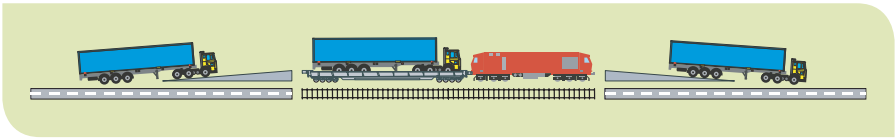
From the possible continental combinations, the one linking road to rail is the most widespread one, thanks to the all year round availability of a vast Europe-wide rail infrastructure (tracks and terminals) offering easily adaptable capacities to the market.

Both the unaccompanied and the accompanied concepts efficiently associate these two modes' respective assets.

Unaccompanied CT



Rolling Motorway (Accompanied CT)

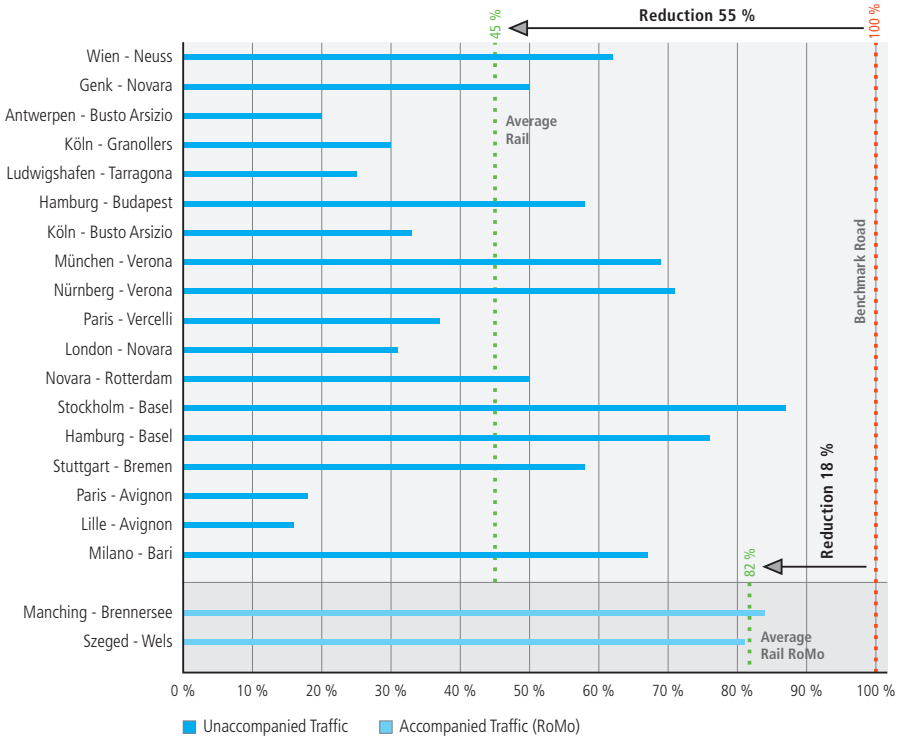


ENVIRONMENTAL BENEFITS OF CT

EVALUATION METHODOLOGY

In order to provide decision-makers concerned with usable evidence of the ecological benefits of Combined Transport, and as a complement to available more global studies in relation to transport, the UIRR ordered a specific analysis with the view of obtaining a realistic picture of the environmental performance of this transport technique.

CO_2 Emissions of road versus CT chain

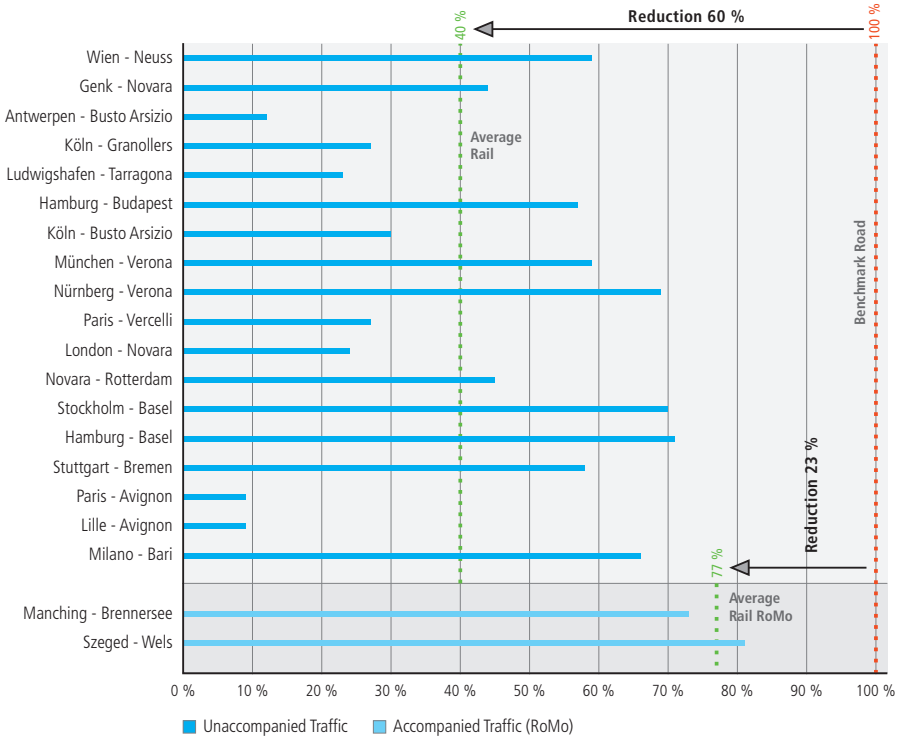


A set of relations was selected, in sufficient numbers to be seen as representative for today's Combined Transport both in terms of geographical coverage of the European continent and in volumes handled.

On the basis of scientifically recognised models, CO_2 emissions were calculated for eighteen unaccompanied CT journeys (both with and without the corresponding road positioning legs) and two accompanied ones.

The data brought down to averages per transport unit were then compared to corresponding road transport carriages on the same O&D segments.

CO_2 emissions of road versus rail per kilometer



FINDINGS

Where percentage-wise savings are necessarily different according to:

- energy source for rail traction
- journey distance
- proportion of the train segment
- load factor, i.e.,

the average reduction in CO_2 emissions of Combined Transport versus full-road operations is impressive, in particular in the unaccompanied concept:

- an average of 55% less CO_2 emissions, and even 60% if road legs are left out of the calculation, which provides a better comparison of the actual environmental performance of both modes.

With roughly 3 mln consignments (unaccompanied + accompanied) handled yearly in a road to rail combination by UIRR's member companies over distances of 800 kms in average, the savings in CO_2 emissions total some 2 mln tons for UIRR alone.

Extrapolating the CO_2 figures to the volumes handled by all operators – UIRR and others –, the savings concerned may be estimated at close to 3 mln tons less emissions representing a reduction in environmental damage of 300 mln EUR.

The ultimate goal is a zero level of CO_2 emissions, on the grounds that railway undertakings are ordering more and more electrical energy from renewable sources.

In any event, the reduction in CO_2 anticipated by shifting the forwarding of goods from road to rail is and will be much higher than any such reduction which may be obtained by more efficient road vehicles.

CONCLUSION

The superior system advantages of rail mode are thus well established. This mode's much lower rolling friction and the broad use of regenerative and non-fossil energy resources as a source of electricity production make it, in combination with road, the obvious choice when it comes to select the environmentally most appropriate transport scheme to move goods in huge volumes on pertinent distances, i.e. as from 350/400 kms.

By doing so, both transport policy makers and stakeholders will to an ever increasing extent benefit from the well known advantages of the road to rail combination which for the essence read as follows:

- relief of the road network
- transfer of goods to a safer and more environment-friendly transport mode, which is also more independent from climatic conditions
- better sharing of transport volumes between modes
- recourse to available transport capacities
- co-operative activity combining the advantages of road (flexibility) and rail (more economical mass transport on longer distances)
- competitiveness in given circumstances
- less space needed per ton carried than in full road haulage
- lower manpower costs: savings on variable costs, reduced personnel needs (drivers, driving time, night work)
- competitive gains
- savings on fuel, thanks to the major part of the journey by rail
- less wear on equipment (tires, maintenance), longer life for trucks and reduced fleet of vehicles due to investment in transferable equipment
- exemption from, reduction or reimbursement of road vehicle taxes
- no need for shippers to change their equipment/logistics
- increased flexibility in the management of transport flows

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« The voice of Combined Transport in Europe »
(19 member companies established in 14 EU and non-EU countries)

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