



INTERNATIONAL UNION
OF RAILWAYS

unity, solidarity, universality

Sustainable development

Activities in 2013

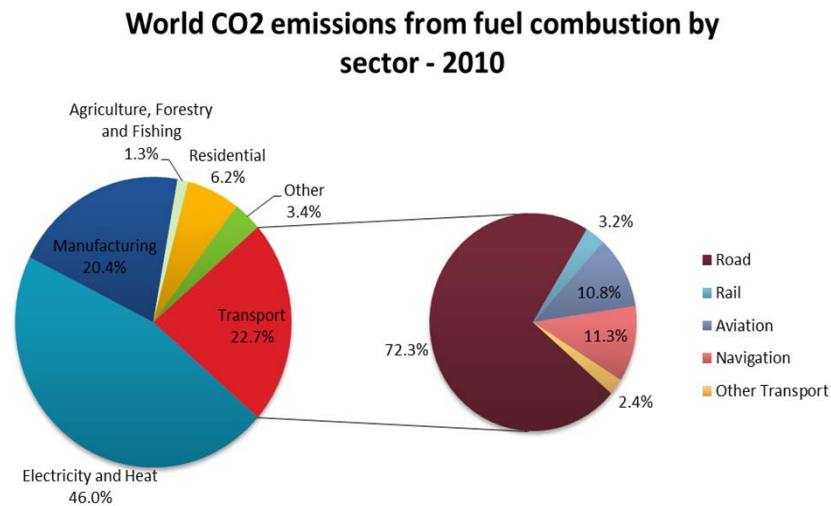
Nick Craven

UIC Mission

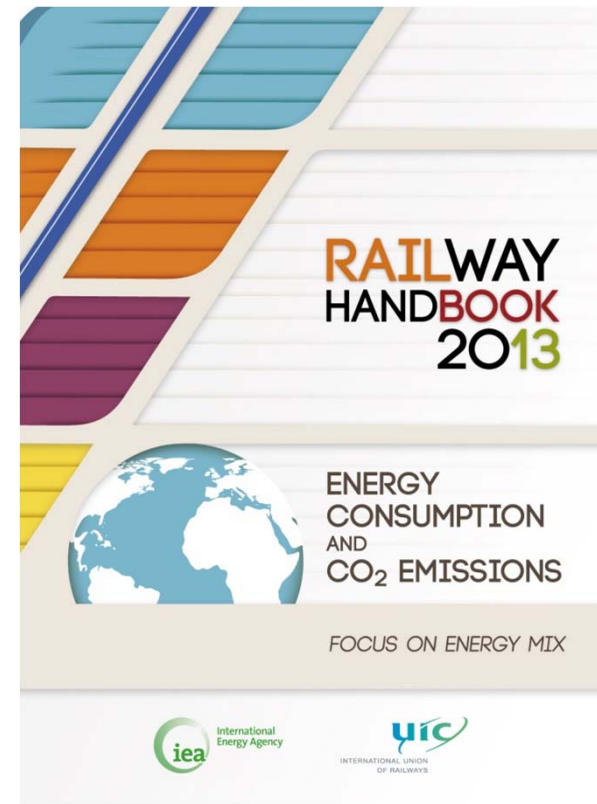
Promoting the development of rail transport
at world level, in order to meet challenges
of mobility and **sustainable development**

Railway Handbook 2013

For the first time the handbook presents aggregate data at work level:

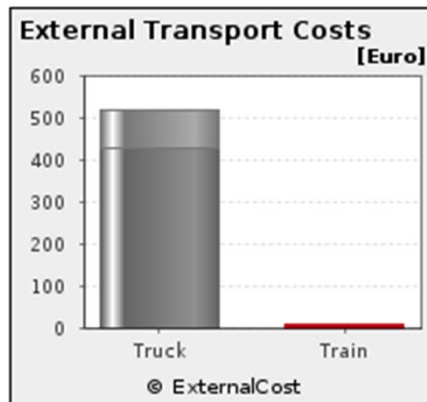


The data illustrates how modal shift to rail can be a major driver for decarbonisation of the transport sector



External costs - online tool

Example calculation: 100 tons of freight from Paris to Genève:



- Train accident costs
- Train climate costs
- Truck accident costs
- Truck climate costs

External Transport Costs		
	[Euro]	
	Truck	Train
Accident Truck	427,90	3,06
Climate Truck	94,22	0,38
Accident Train	0	4,32
Climate Train	0	2,62
Sum:	522,12	10,38

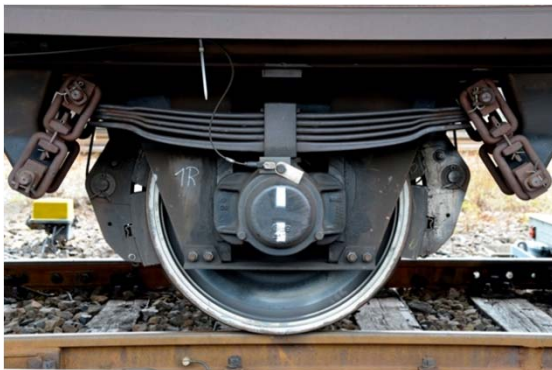
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The IMPACT methodology is used for accident cost, Truck marginal cost & Rail average accident cost. Climate change is calculated with 25.0 €/tCO. All external costs refer to 2008 and are also expressed in the price level of 2008.

www.externalcost.eu



- > **New low noise technology for freight trains**
- > **10 dB or 50% reduction in noise emission**
- > **Key enabler for acceptance of rail freight and modal shift**
- > **€15 Million development cost met by the European rail sector**
- > **Cost-effective noise reduction for existing freight wagon fleet**



**Cast Iron
(rough wheel)**



**LL-block (IB116*)
(smooth wheel)**





- > **Partly EU funded project to develop, improve and integrate emission reduction technologies for diesel locomotives and rail vehicles**
- > **Technologies include**
 - **Particulate Filters**
 - **Alternative fuels (20% biodiesel & FT fuels)**
 - **Exhaust Gas Recirculation System (EGR)**
 - **Selective Catalytic Reduction (SCR)**
 - **Hybrid-Drive-systems (regenerative braking & energy storage) for 10-20% reduction in fuel consumption on suburban & regional routes**
- > **UIC lead WP5 Sustainability & Integration**
- > **Final conference: Brussels 20 November 2013**



- > **EU funded research project, €7.1 Million, 19 partners, concludes Sept 2015**
- > **Main aim and purpose: to investigate and demonstrate the viability of an integrated management system to achieve a more sustainable and optimised energy usage in European electric mainline railway systems.**
- > **Where the results are implemented, an overall reduction in energy use of 10% is expected**
- > **The UIC role is to disseminate the findings**

Thank you for your kind attention,

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