

# FREIGHT TRANSPORT

PHOTO BY KENDALL HENDERSON/UNPLASH



## BRAZIL AND CLIMATE CHANGE



Transport is one of the main global sources of greenhouse gas (GHG) emissions. Estimates point to a continued growth in freight and passenger emissions, which, according to the United Nations, already account for 25% of global GHG emissions annually.

In 2015, freight transport in Brazil was responsible for emitting 105.2 MtCO<sub>2</sub> – a little over half of all emissions from the national transportation sector.

Brazil heavily relies on the most carbon intensive of all freight transportation modes: road. This dependence on trucks and other road transportation modes (65% of all cargo transported) is the main cause behind this high carbon intensity.

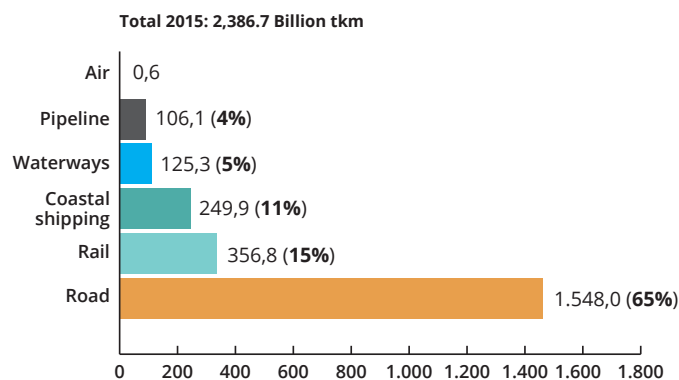
This modality profile places Brazil in a unique position in relation to other large global emitters, as emissions from transportation are the main emissions in the energy sector.

Within this scenario, long-term measures that reduce dependence on road transportation, promote new technologies and raise efficiency standards in the truck fleet – the principle emitter for this modality, representing 79.8% of

all sector emissions – are fundamental if Brazil is to mitigate its emissions in this sector.

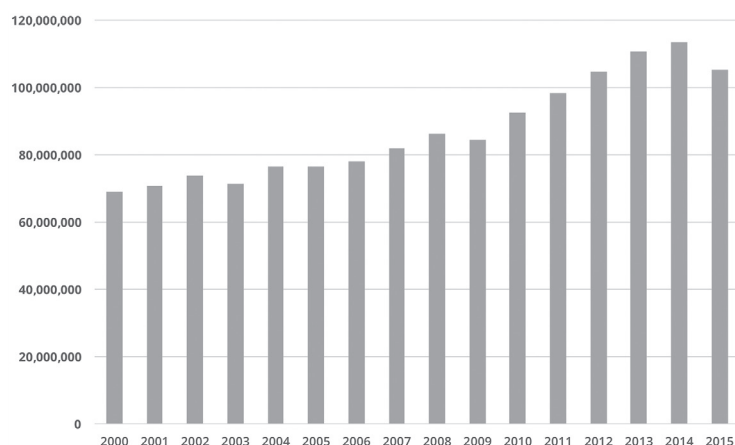
Other mitigation measures in the short and medium term include fleet renovation and logistics strategies that are both low-carbon and integrated.

### BRAZIL: DIVISION OF FREIGHT TRANSPORT BY MODALITY (2015)



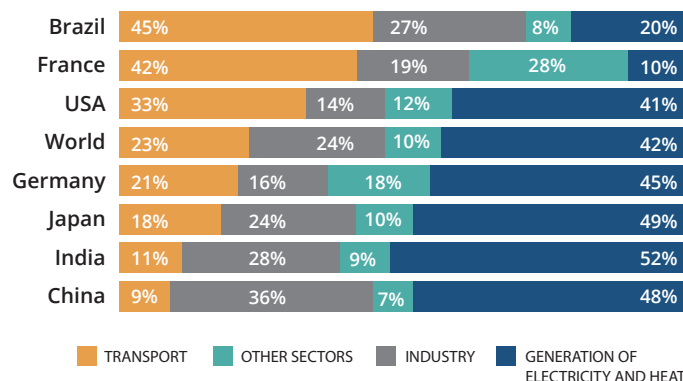
Source: PNLI (EPL, 2016)

### EMISSIONS FROM FREIGHT TRANSPORT



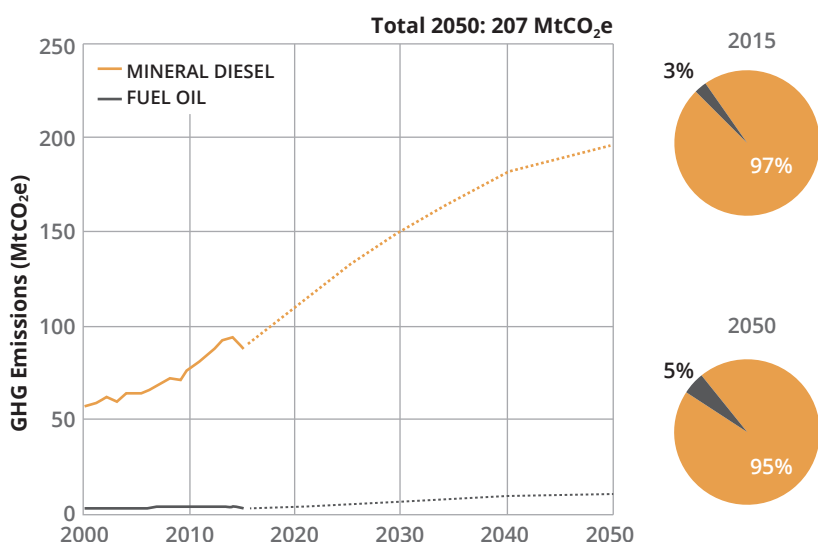
Source: SEEG

### GHG ENERGY EMISSIONS BY SECTOR (%): GLOBAL COMPARISON 2014

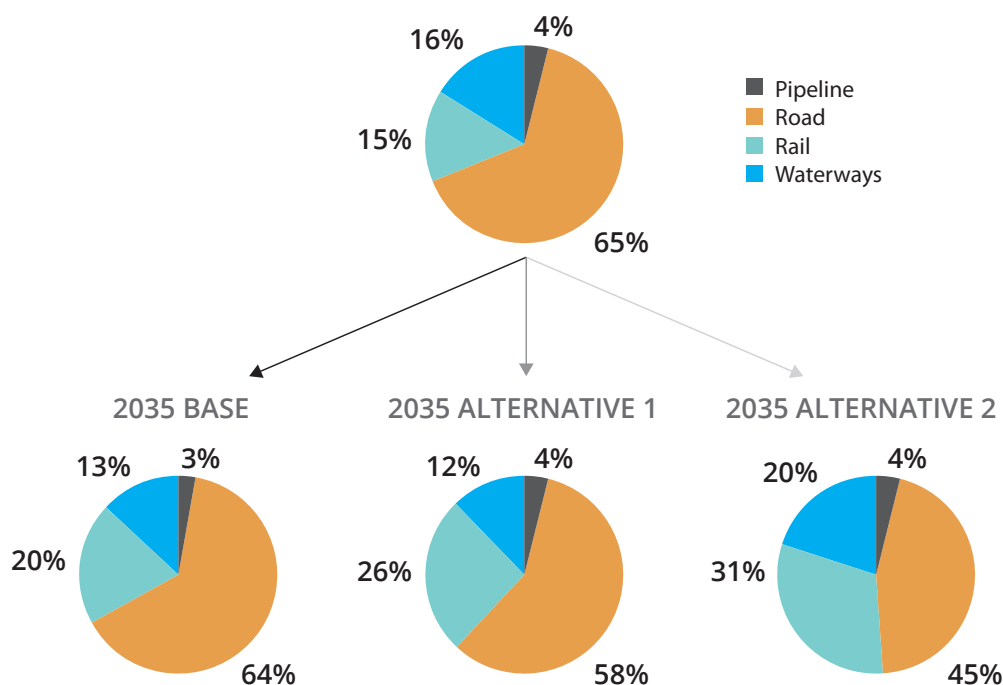


Source: IEA, 2016; (Industry includes consumption of energy by industry, production of fuel and fuel consumption in the production of metals)

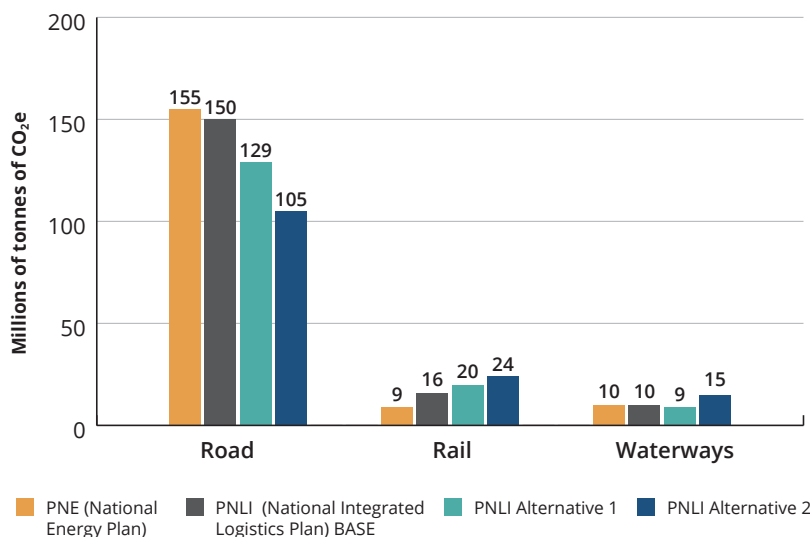
## EMISSION PROJECTIONS OF CO<sub>2</sub>e IN FREIGHT TRANSPORT (EPE 2050)



## MODALITY MATRIX OF FREIGHT TRANSPORT PROJECTIONS (SIMULATIONS PNLI 2035)



## EMISSION PROJECTIONS FOR GHG IN FREIGHT TRANSPORT: 2035



## UNFAVORABLE PROJECTIONS

Future projections performed by the Energy Research Company (EPE) indicate a considerable growth of GHG emissions for freight transport until 2050.

Different scenarios of modal composition are included in the National Integrated Logistics Plan (PNLI), which show potential emission reductions outside the “business as usual” scenario.

The 2035 Alternative II potential scenario is a desirable low-carbon future, but presents structural challenges in stakeholder coordination, long-term planning, and financing.

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