

# Green Freight Strategy: Experiences of ADB Green Freight Project

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# Presentation Areas

- A. Project Results
- B. Lessons Learnt
- C. Stakeholders

# A. Project Results

- Objectives and Scope
- Green Freight Measures
- Measurement
- Impact
- Cost-Benefit
- Financial Structuring
- Options for the Future

# The Project

- Objective: foster low carbon sustainable freight transport
- Main Institutions: ADB, MOT
- Time Frame: 1.2015 to 8.2016
- Countries: Vietnam, Laos, Thailand
- Scope: Road based long-haul transport

# Green Freight Measures

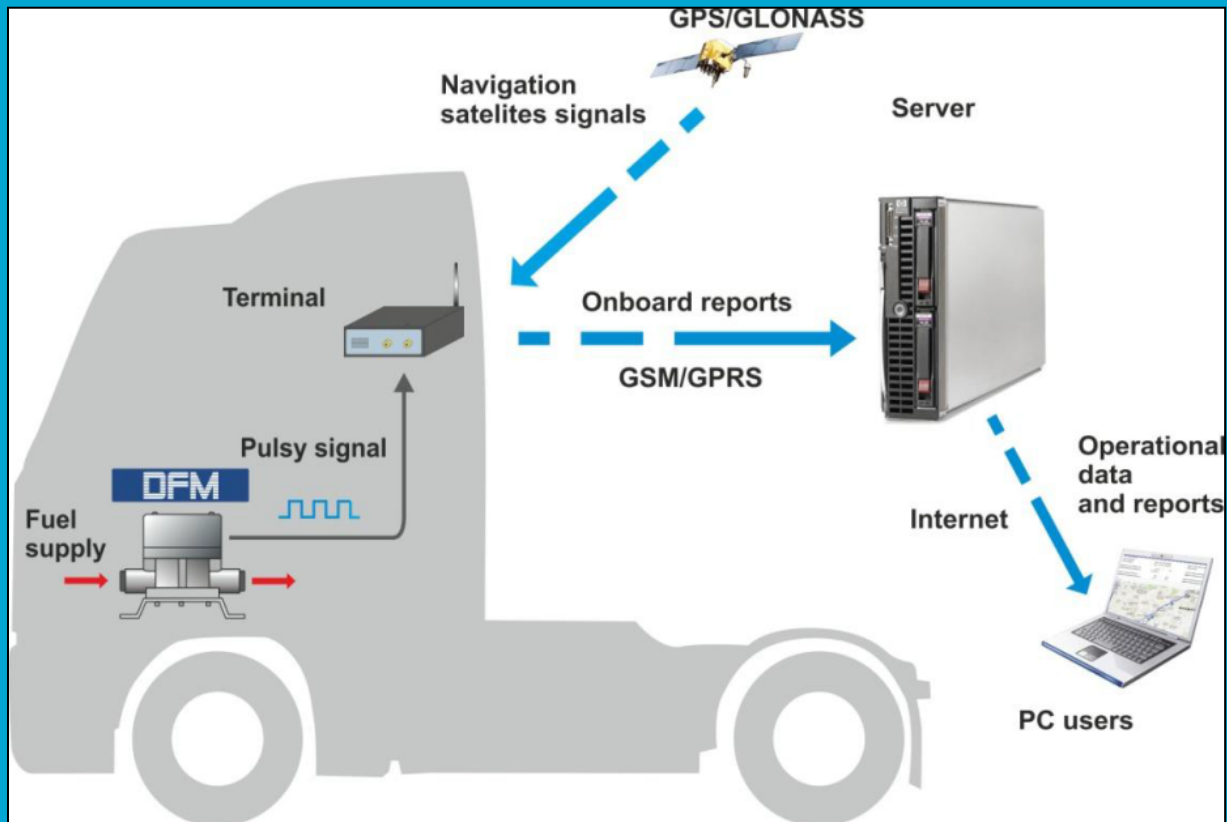
• ASIF



Activity	Viet Nam	Lao PDR
Aerodynamic equipment	11 trucks	11 trucks
Efficient Tires	15 trucks	12 trucks and 3 buses
Fuel Audit Tool	20 companies	20 companies
Eco Drive training instructors	15 instructors	15 instructors
Eco Drive training drivers	100 drivers	100 drivers
Workshops	2 workshops with 90 participants	2 workshops with 72 participants
Brochures	3 brochures	3 brochures
Reports	12 technical reports	

# Measurement

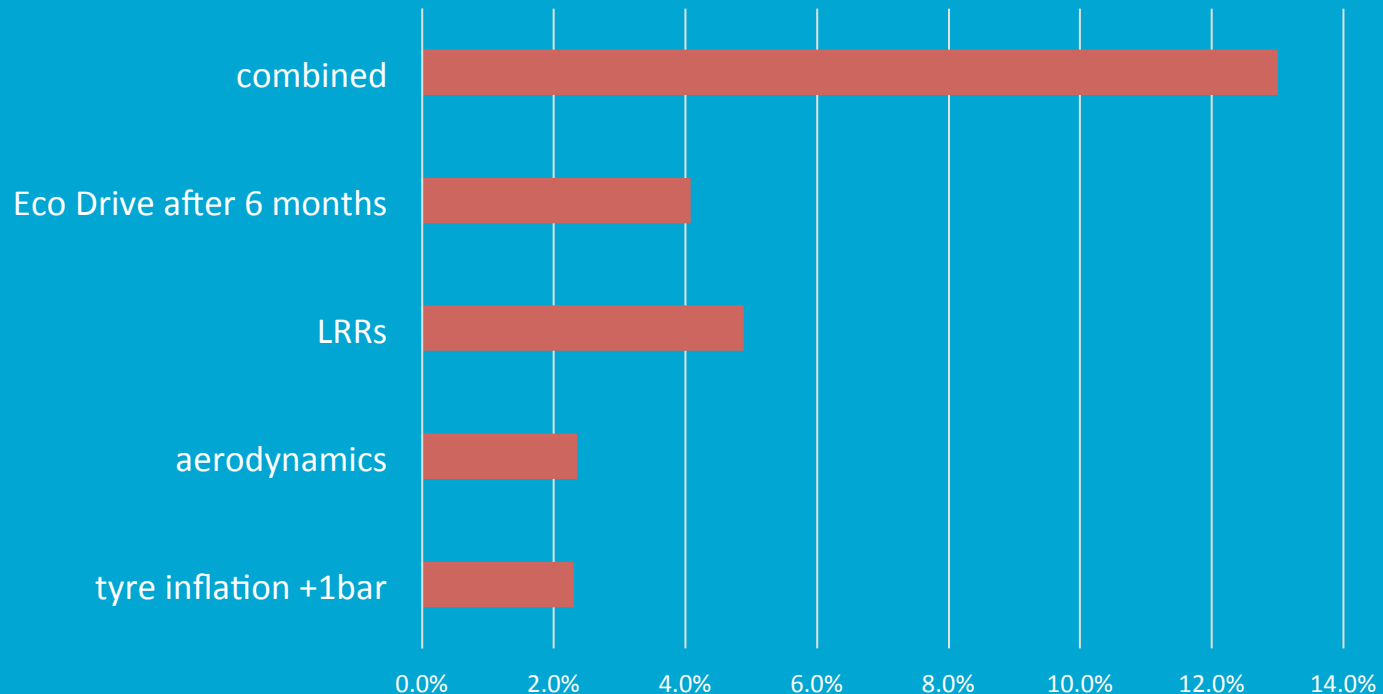
- Minimum: Fuel, Distance, Speed
- Good: Weight



# Impact

In absolute terms combined 7-11 tCO<sub>2</sub> per truck per annum (9-15 tCO<sub>2e</sub> WTW incl. BC)

## Fuel Savings



# Cost-Benefit

- CAPEX of measures <1,000 USD per truck
- Payback time 6-12 months
- FIRR combined > 90%

However.....

- Lack of reliability and visibility of savings
- Upfront additional investment
- Systemic problem: drivers are being paid a fixed amount for fuel and therefore lack of interest of the truck owner to invest in energy saving device

Therefore.....

Market process alone will NOT get to Green Freight



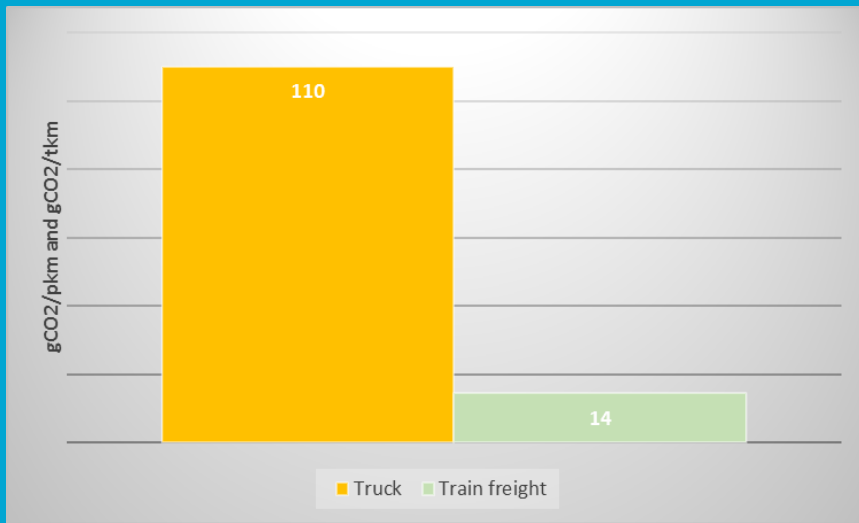
# Financial Structuring

- ESCOs
  - Small individual amounts
  - Difficult to prove savings
  - Mixed practical experience (WB, CSS)
- GPOs
  - Requires large member-base
  - Limited percentage of savings
  - Future rather non-specialized websites
- Climate funds
  - Positive practical experience

# Future

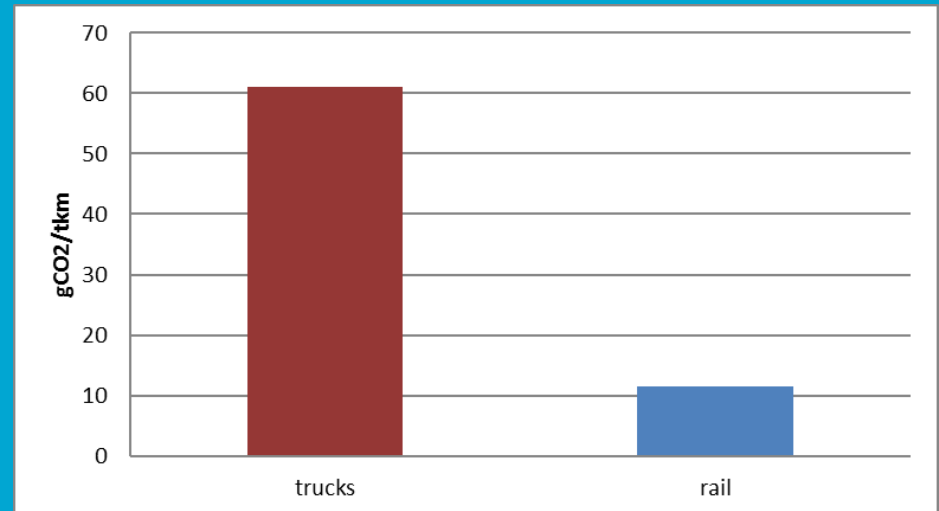
- LRRs: Label → National regulations COR
- Eco Drive: Integrate in compulsory national curricula
- Logistics: Label
- GFTs: Green Freight Fund for incremental finance and TA sourced by climate funds

# Other Options: Mode Switch



Bangladesh

India



# Other Options: Alternative Technologies or Fuels



Hybrid truck

Electric truck



LNG trucks



# Other Options

- Larger trucks
- Better load factors
- Economic instruments
- Logistics chain
- Avoid trips



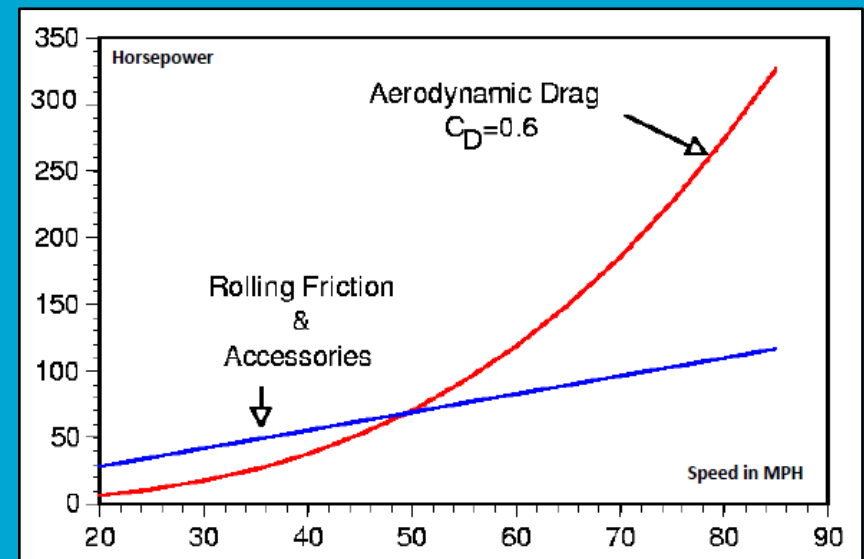
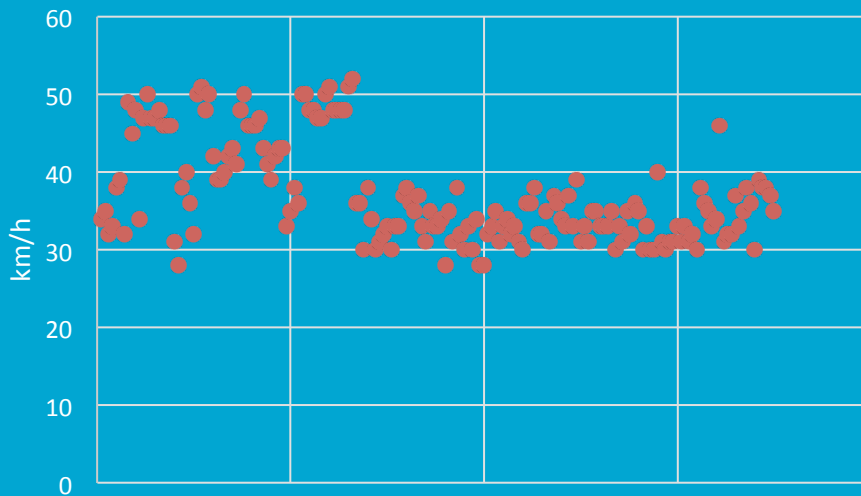
# B. Lessons Learnt

- Localize
- Measurement
- Implementation

# Localize

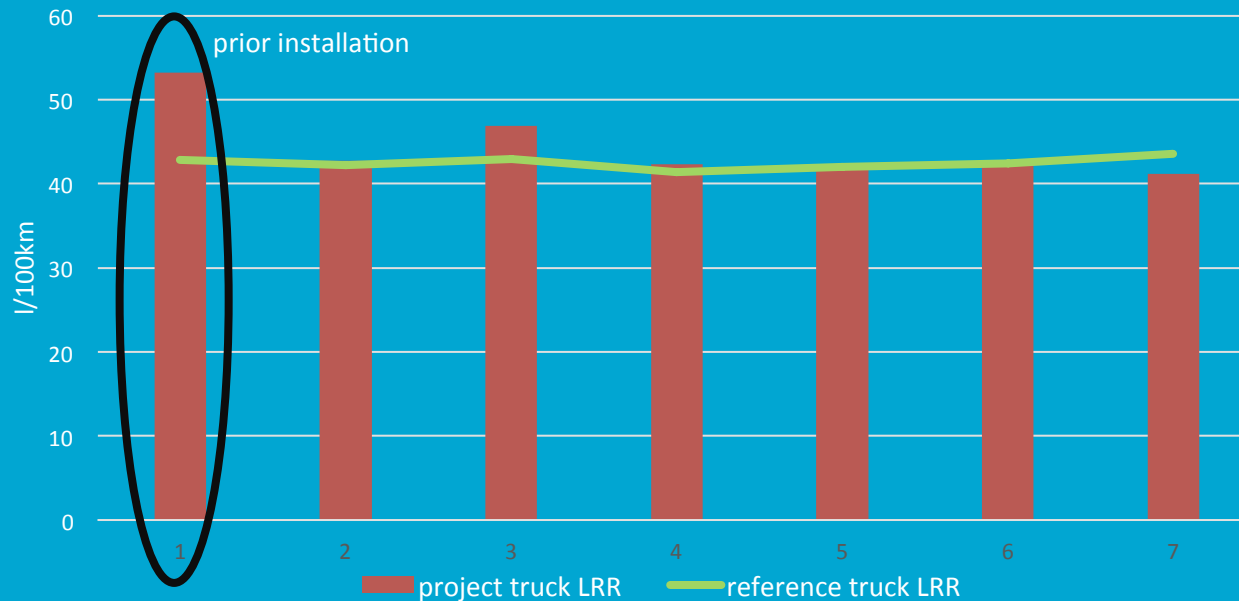
- Experiences from other countries especially US and EU only partially valid

Average truck speed Vietnam and Laos



# Measure

- Lack of reliable measurement reports
- Appropriate equipment required as reports of companies are not reliable
- Methodological approach before-after most reliable





# Implementation

- Availability of technologies influence costs (e.g. tire inflation, telematics, LRRs)
- Technology base used influences costs (e.g. tube tire usage)
- Logistics approaches require appropriate initial assessment of circumstances
- Solutions e.g. internet-market-places require upfront other building blocks e.g. insurance schemes

## C. Stakeholders

- Government: Regulations e.g. Eco Drive, tires
- Trucking Companies: identify champions
- Equipment Providers: client base, outreach
- Associations: outreach, Eco Drive curricula
- Finance System: climate finance; national finance more important for new truck investment and not for retrofit investment

# Thank you!

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