

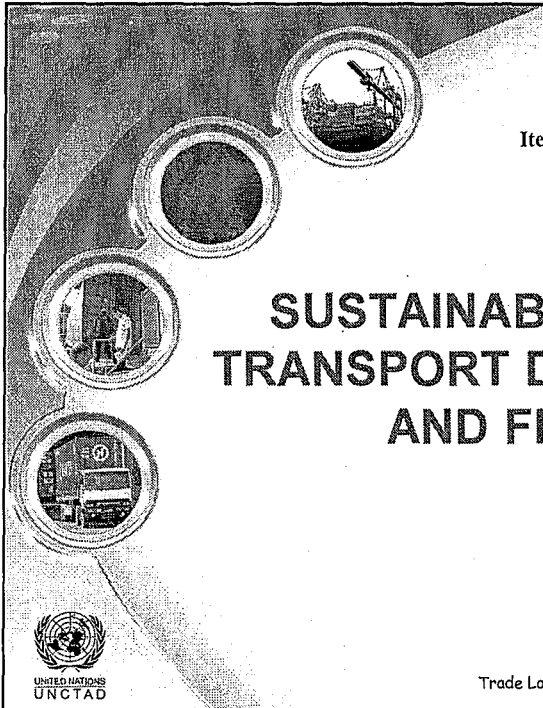
**Trade and Development Commission**  
*5th session*

**17-21 June 2013**  
**Geneva**

**Sustainable Freight Transport Development and Finance**


**By**  
**Frida Youssef**  
**Economic Affairs Officer, Transport Section**  
**Trade Logistics Branch**  
**Division on Technology and Logistics**  
**UNCTAD**

**The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.**




Trade and Development Commission  
fifth session, 17-21 June 2013, Geneva  
Item 5: Key trends in international transport  
and implications for development


## SUSTAINABLE FREIGHT TRANSPORT DEVELOPMENT AND FINANCE

 UNITED NATIONS  
UNCTAD

Frida.youssef@UNCTAD.org  
Trade Logistics Branch, Division on Technology and Logistics



### Shifting towards Sustainable Freight Transport (SFT)



- Environmental sustainability is increasingly arising as an important consideration for transport, the sector is coming under greater pressure to break away from resource-intensive growth and to shift towards greener, low-carbon and more environmentally-friendly patterns.

2



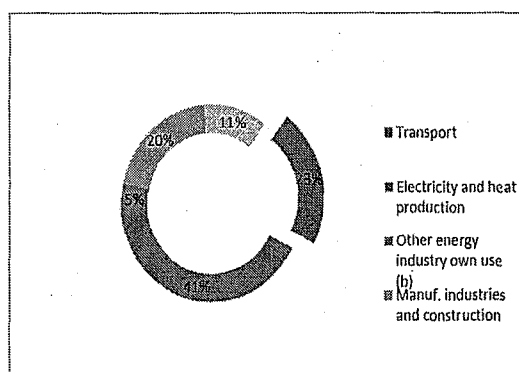
## Key data

- Over 95% of fuels in the transport sector are fossil based.
- Forecast indicates that world freight flows will grow by 3 to 4 times above 2010 levels over next four decades.
- The sector consumes over 50% of global liquid fossil fuels and is projected to grow over 45% overall from 2008 to 2035.
- Nearly 25% of global carbon dioxide (CO<sub>2</sub>) emissions are transport related and these are expected to increase by 57% worldwide between 2005 and 2030.
- More than 80% of the predicted growth in transport emissions would be in developing countries and with most of the emissions being generated by land transport.
- International shipping accounted for 2.7% of the global CO<sub>2</sub> emissions (2007). Ship emissions may increase by 200–300% by the year 2050 (compared to the emissions in 2007) due to the expected continued growth in international seaborne trade.

3



## ● World CO<sub>2</sub> emissions from fuel combustion by sector, 2009



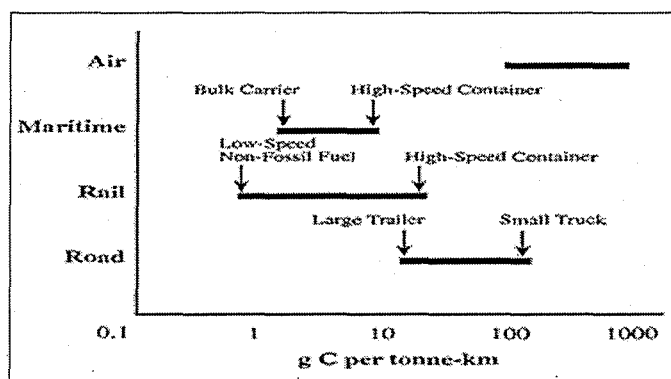
Source: CO<sub>2</sub> Emissions from Fuel Combustion Highlights, 2011, IEA.

4



## ● Comparison of CO<sub>2</sub> emissions in freight transport by mode of transport

(Grams carbon per ton freight carried per kilometre)

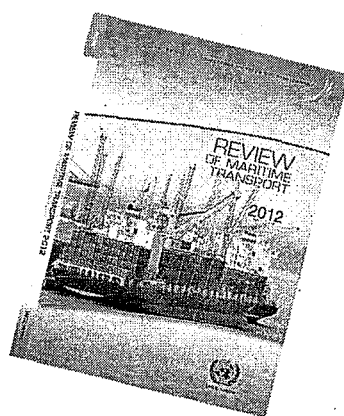


Source: Intergovernmental Panel on Climate Change (IPCC)

5



## Sustainable Freight Transport



- Sustainability in freight transport entails the ability to provide **fuel efficient, cost-effective, safe, environmental-friendly, and climate-resilient** transport systems.

6



## Avoid-Shift-Improve approach

- **Avoid** inefficient freight transport and operations such as empty trips;
- **Shift** cleaner transport modes (railways and waterways when applicable), clean fuels, clean technologies, etc., and ;
- **Improve** infrastructure, operations, logistics systems, safety and fuels efficiency.

7



## Examples of Government-led initiatives

### Example 1: European Commission White Paper on transport (adopted in March 2011)

An integrated transport planning approach that defines a strategy towards competitive and resource-efficient transport systems. Key goals include:

- (a) Developing efficient and environmentally-friendly freight corridors;
- (b) Shifting 50% of longer-distance freight journeys from road to other modes (rail and waterborne transport);
- (d) Using 40% of sustainable low-carbon fuels in aviation;
- (e) Achieving at least a 40% cut in shipping emissions.

**A roadmap of 40 concrete initiatives with overall an objective of achieving a total of 60 % reduction in CO<sub>2</sub> emissions and a comparable reduction in oil dependency by 2050.**

8



## Examples of Government-led initiatives

### Example 2: Indonesia comprehensive sustainable transport policies that aim at

- Promoting sustainable freight transport;
- Reducing the transport burden on roads, the predominant mode of transport (which accounts for about 70% of freight ton-kilometres)

Policies include:

- Shift towards greener modes of transport such as rail and short-sea shipping, and
- Develop rail-based logistics in Jakarta to relieve traffic congestion caused by freight movements.

9



## Key recent global regulatory developments to control GHG emissions in the maritime sector

- In 2011, IMO adopted the first global regime that addresses carbon emissions from international shipping, namely
  - ❖ the **Energy Efficiency Design Index (EEDI)** and
  - ❖ the **Ship Energy Efficiency Management Plan (SEEMP)**.

Entered into force on 1 January 2013

10



## Examples of Industry-led initiatives

**ECO-ships.** fuel-efficient and environment-friendly ships.

Examples:

SinoPacific Shipbuilding Group launched, in May 2012, a new generation of fuel-saving and environment-friendly bulk carriers - representing a 13% reduction in fuel consumption compared to equivalent-sized bulk carriers currently operating.

Maersk is reportedly spending up to \$35m retrofitting around 70 tankers over the next 2-3 years, installing fuel saving devices and new clean technologies. It is claimed these measures can achieve around 7-8% cost savings.

11



## Examples of Industry-led initiatives

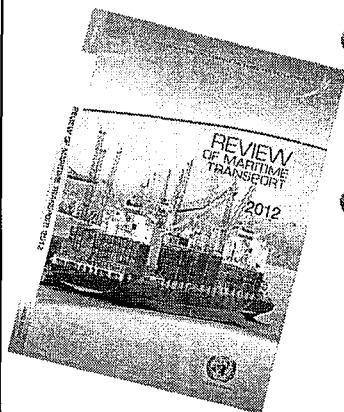
**Ports and terminal initiatives.** Various opportunities have also emerged for improving environmental sustainability.

Examples vary from enhanced port infrastructure design (such as changing terminal layouts to reduce time and processes required to move containers and cargo), adoption of energy efficiency programmes and using renewable energy (such as biofuels, solar energy and wind turbines to cater for port operations, handling of cargo, and vessel servicing), switching to greener modes of transport for hinterland access (e.g. rail, inland waterways), etc.

12



## Enabling sustainable freight transport: finance-related considerations

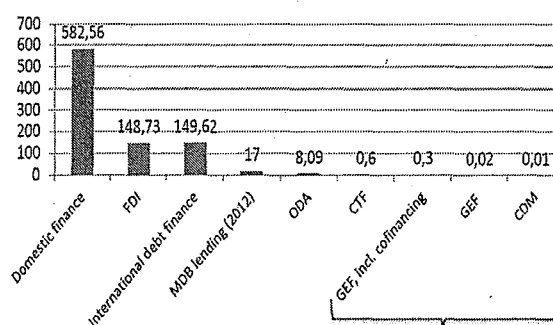


- Shifting towards sustainable freight transport will necessitate more resources and capacities than are available.
- A fundamental element will be the promotion of a collaborative approach between **public and private investment** partners to meet the increased investment requirements for more sustainable transport patterns.

13

Transport is shaped by financial flows from various sources – public and private, national and international

Global transport investments by source of finance in annual terms (US\$ bn)

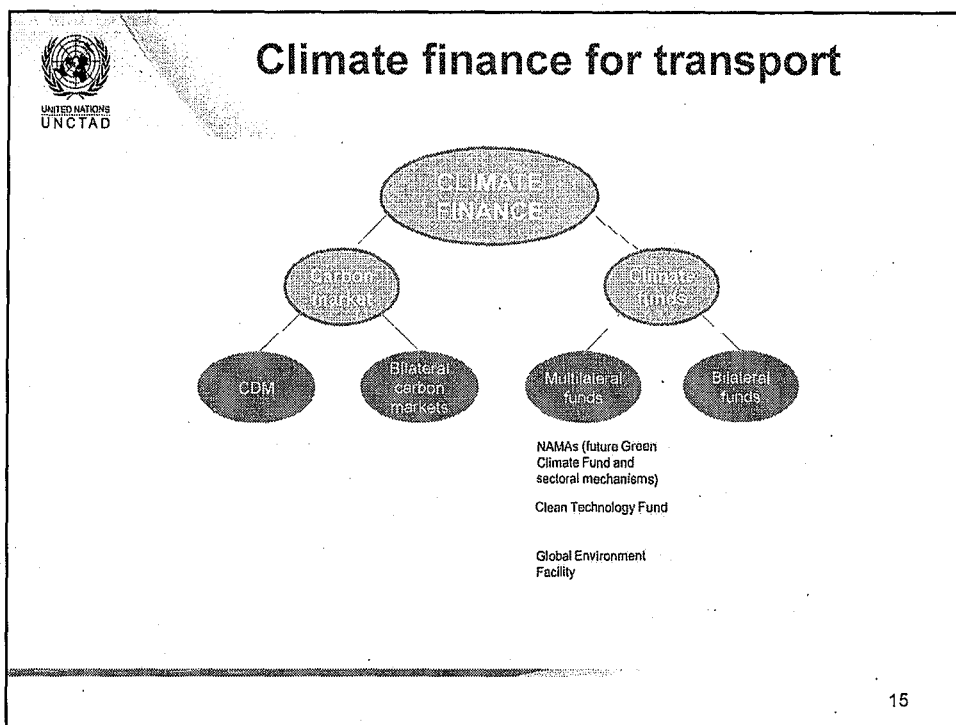



Source: ITDP, 2010, based on UNFCCC (2007) and Bakker and Huizenga (2010)

Climate finance

14





 **Conclusion**

- Even though there has been significant progress in sustainable freight approaches and practices, meeting effectively and in full the sector's sustainability objectives has yet to be achieved.
- The challenge now is for all countries to promote sustainable transport policies, strategies, planning and investment decisions that balance the economic, environmental and social objectives.
- Sustainable freight transport requires substantial investments in transport infrastructure, services and equipment.
- The public sector (as an investment provider, a co-sharer of risk or guarantor, or as facilitator) and the private sectors (through PPPs) have important roles to play to ensure requisite funding.
- Climate finance instruments can be used as leveraging devices that can help promote sustainable freight transport in several ways.

16

