China’s efforts on Developing Low-carbon Transport

Initiatives, challenges and perspectives

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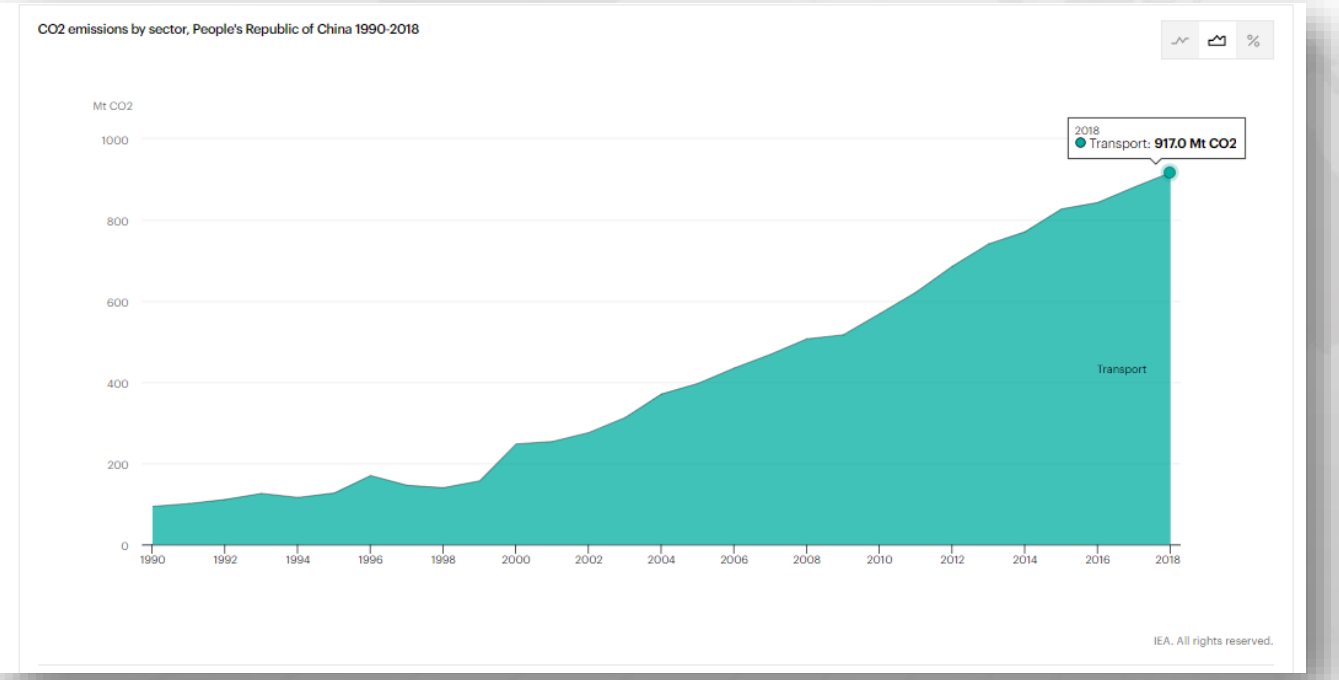
Context

1. Profile of low-carbon transport China
2. Policies and Initiatives
3. Climate actions of urban and public transport
4. Challenges and the way forward

1. National context



Dara source: IEA

- According to the *Statistical Communiqué on the Development of Transport Industry in 2019*, cargo transported by coastal transport in China was 1.93 billion tons, and the freight turnover was 2.422 trillion t-km
- According to IEA statistics, the CO2 emissions by transport of China in 2018 accounted for 917.0 Mt.
- In 2019, the road and waterway transport enterprises that the state focused on monitoring were 123. Regarding 425 ocean-going and coastal cargo ships, the average energy consumption is 4.8kg ce/1000t·n-mile.

2. Policies and Initiatives

01

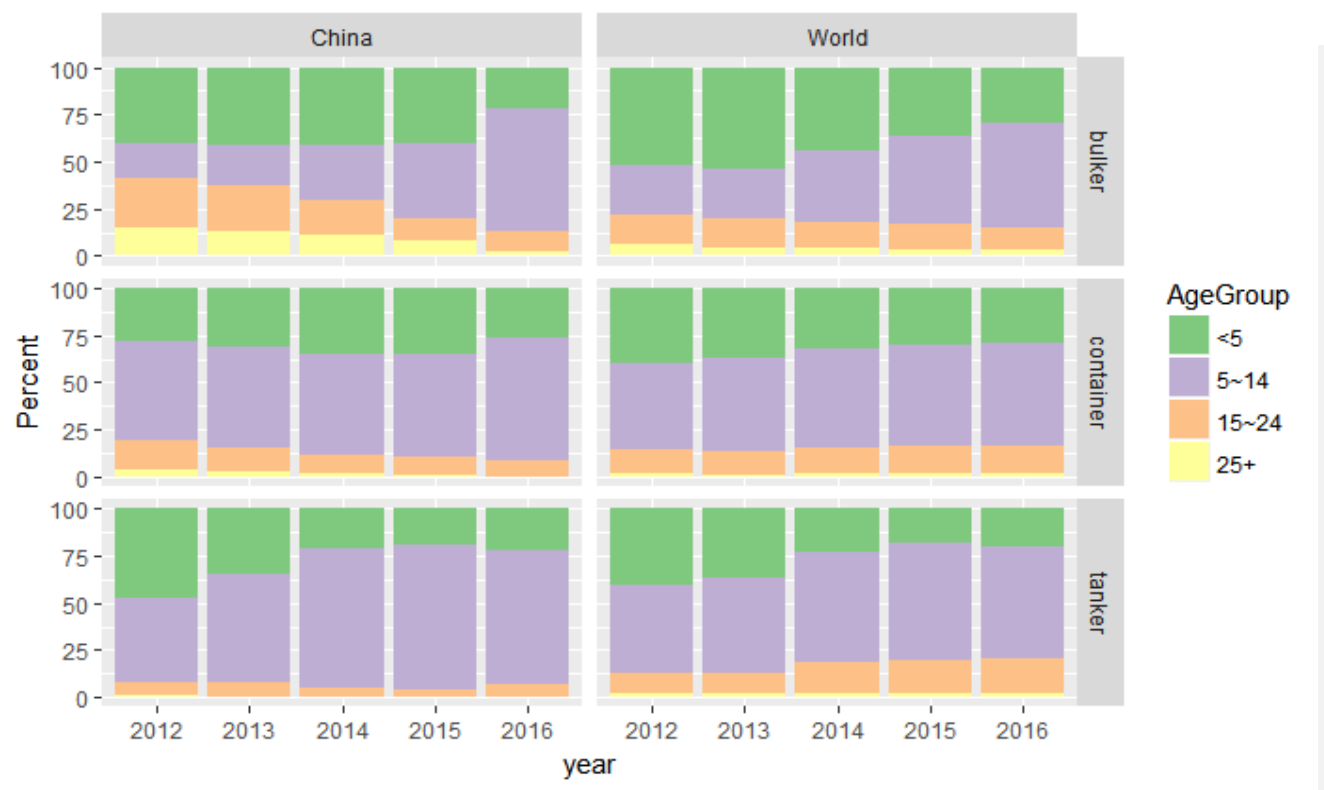
Accelerating structural adjustment

- China issued *the Implementation Plan for* ***Accelerating Structural Adjustment to Promote the Transformation and Upgrading of the Shipbuilding Industry*** *(2013-2015),* which played a significant role in accelerating the restructuring of the national shipbuilding industry and the pace of transformation and upgrading of China's shipbuilding industry for its healthy and orderly development.
- In 2014 four ministries jointly issued ***an Implementation plan for the early phase out of old ships and single-hull oil tankers.*** Consequently, a large number of old ships and single-hull oil tankers of high energy consumption and with high safety and pollution risks were phased out, which significantly promoted energy conservation and environmental protection.

2. Policies and Initiatives

01

Accelerating structural adjustment



Comparison of age between China fleet and world fleet

2. Policies and Initiatives

02

Promoting modal shift in transport

- MOT issued the *Action plan for modal shift in transport between 2018 and 2020,* which **facilitated transport mode transferring to railway and waterway;**
- MOT issued *Opinions on Promoting the Development of* **river-sea transportation,** which improved the supporting infrastructure construction relating to river-sea transportation;
- **Promoting the development of multimodal transport.** The scale of multimodal transport has steadily increased. In 2019, railway-water intermodal transport capacity increased by 14.2 percent.

2. Policies and Initiatives

03

Uptakes of alternative fuels and clean energy

- China MOT actively cooperates with relevant departments to encourage the use of LNG as fuel on vessels, and promote the application of technology and management experience of LNG fuelled ships through pilot projects. To date, 20 LNG refuelling stations were constructed in inland water, more than 280 LNG-driven ships were built.
- China MOT encourages governments at all levels to establish incentive policies to facilitate the use of shore power by ships and reduce costs, and facilitate the construction or transformation of connecting systems, equipment. By the end of 2019, over 5400 shore power supply capabilities in domestic ports were constructed, covering more than 7000 berths.

2. Policies and Initiatives

04

Encouraging R&D of innovative technologies

- China MOT provides pilot projects to encourage R&D and uptakes of renewable energy such as solar energy, wind energy and hydrogen fuel cells in the shipping industry. Lists of energy saving technology on transport sector were published in 2016 and 2019 respectively.
- During 2015-2020, 33 regulations or standards on energy saving, application of alternative fuels were developed or amended.

2. Policies and Initiatives

05

Actively engaging in international/regional cooperation

- China actively participated in the negotiations and cooperation under the frameworks of **UNFCCC and IMO** to jointly promote the development and implementation of policies and regulations on GHG emission reduction by international shipping.
- China engaged in **international cooperation projects** such as IMO Global Maritime Energy Efficiency Partnership(GloMEEP) project and Maritime Technology Cooperation Center (MTCC), with a view to contributing capacity building in achieving green shipping among regional developing countries.

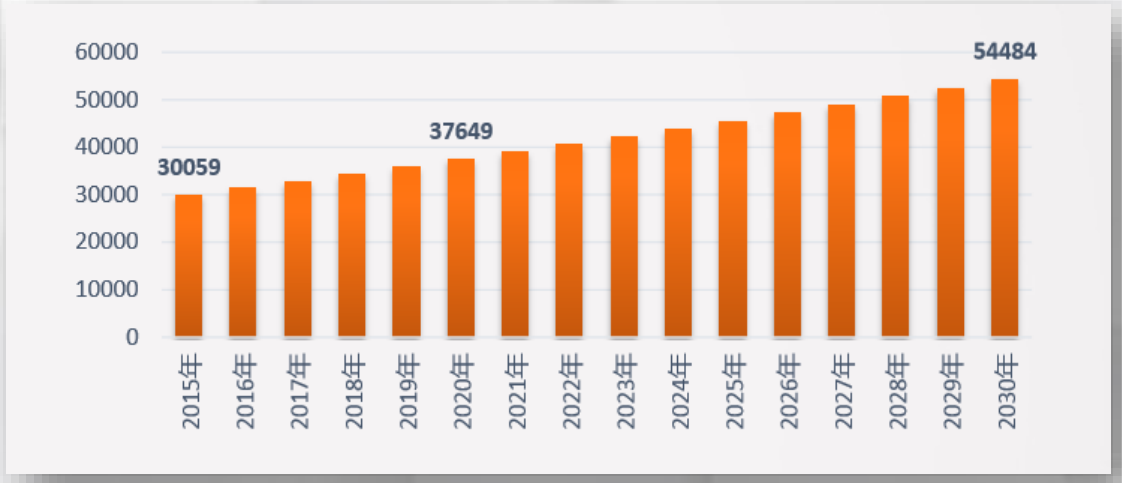
3. Climate actions of urban and public transport

- **Encourage green travel lifestyle** by establishing action plan on green travel (2019-2022), which conducted public transport city pilot projects in 87 cities, with a view to promoting the development of public transport;
- In 2019 a *notification of supporting wide use of new-energy buses* was issued by 4 Ministries to facilitate the **popularization of the new-energy buses.** Incentive policies including tax exemption were established to encourage transport enterprises to purchasing urban electric buses. By the end of 2019, the total amounts of new-energy buses nationwide were 410,000, accounting for 59% of the total buses.

3. Climate actions of urban and public transport

- **Accelerating construction of urban rail traffic.** By the end of 2019, 190 urban rail lines were put into operation among 41 cities, their operating mileages has reached over 6000 kilometers, passenger transport volume of China’s urban rail system during 13-5 was 3.84 billion, showed a growth trend around 14.2% per year.

4. Challenges and the way forward



passenger transport trend in China during 2015-2030 (100 million person-km)

Freight transport trend in China during 2015-2030 (100 million ton-km)

- The increasing demand for transport in future poses pressure for emission reduction in transport sector.

4. Challenges and the way forward

- **Measures for adaption and resilience building for transport need to be strengthened**
- **Insufficiency in monitoring and reporting system**
- **Capacity gaps in energy efficiency management**

4. Challenges and the way forward

- Further Enhancing Energy Efficiency of vessels;
- Promoting modal shift in transport，facilitating multimodal transport;
- Accelerating uptakes of clean energy and alternative fuels in public transport and vessels;
- Encouraging green travel, implementing public transport first strategy;
- Actively participating International and Regional Cooperation;
- Establishing the Monitoring, Reporting and Verification System, enhancing Capacity Building, especially for adaption and resilience building