

# Freight Operations: Commodity-wise Analysis

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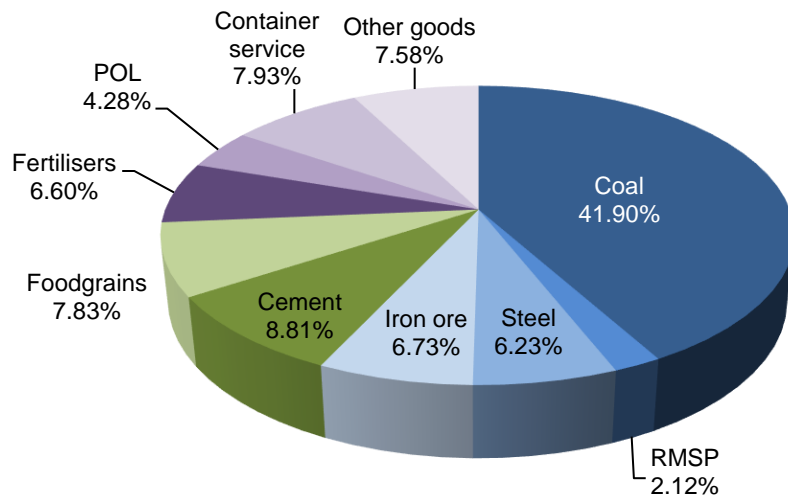
# Commodity-wise Freight Traffic and Earnings Trends

The freight basket of IR is dominated by nine major commodity groups, namely coal, iron and steel, iron ore, other raw materials for steel plants (RMSP), cement, foodgrains, fertilisers, petroleum products and container traffic.

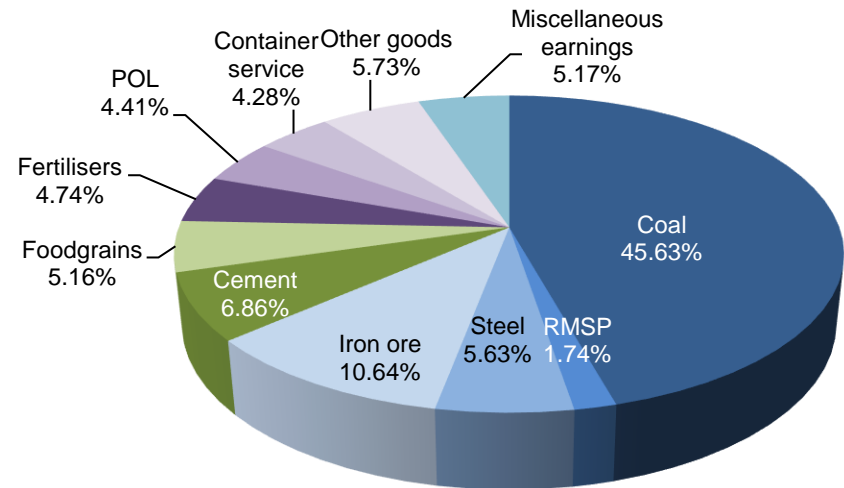
During 2019-20, coal carried the highest share in freight traffic to the tune of 41.90%, followed by cement (8.81%) and container service (7.93%).

Coal also contributed the maximum share to the freight earnings to the tune of 45.63%, followed by iron ore (10.64%) and cement (6.86%) in the commodity-wise freight earnings.

**Commodity-wise Composition of Freight Traffic (2019-20)**



**Commodity-wise Composition of Freight Earnings (2019-20)**



\*Budgeted

RMSP: Raw Material for Steel Plants, Balance goods include commodities such as salt, non-ferrous metals, marble, bamboos and fruits and vegetables

Source: Demand for grants analysis, PRS

# Coal

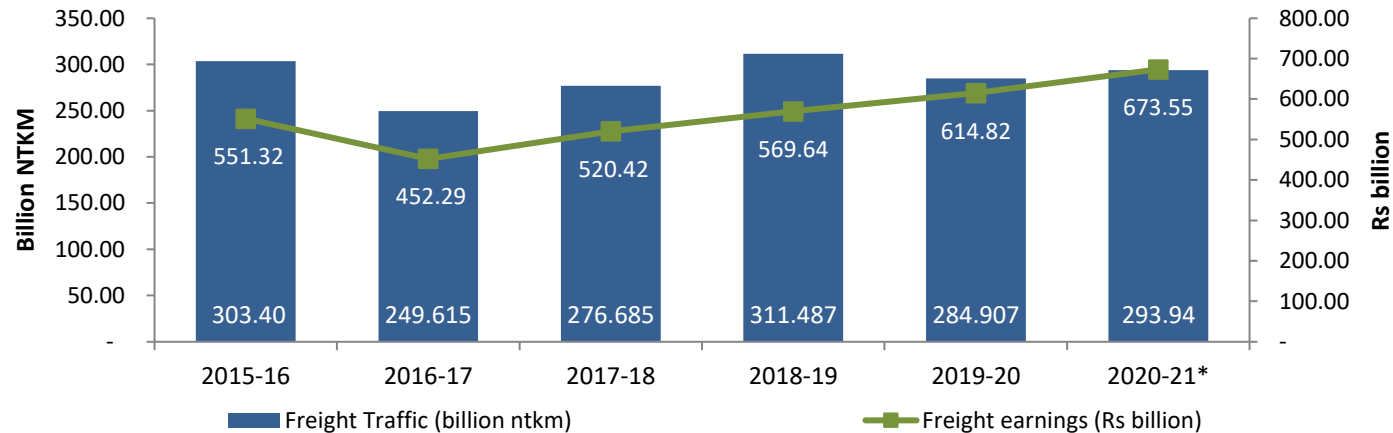
Coal accounted for the maximum share in the commodity-wise freight traffic in 2019-20.

During 2019-20, it contributed around 285 billion NTKM to the freight traffic. Besides, the freight earnings from coal stood at about Rs 615 billion in 2019-20.

During the time period 2015-16 to 2019-20, the freight traffic from coal declined at a CAGR of 1.56% whereas earnings grew at a CAGR of 5.13%.

As per the budget estimates, the freight traffic and earnings from coal are estimated to be about 294 billion NTKM and Rs 673.5 billion in 2020-21.

**Trends in Freight Traffic and Earnings from Coal (2015-16 to 2020-21\*)**



\*Note that figures for 2020-21 are budget estimates.

Source: Demand for grants analysis, PRS

# Raw Material for Steel Plants (RMSP)

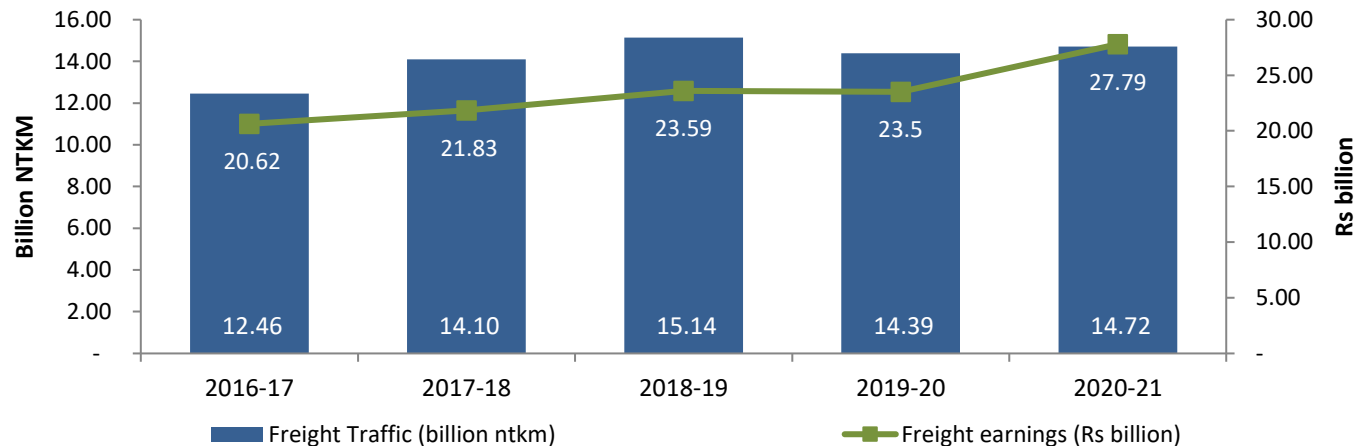
RMSP accounted for 2.12% share in the commodity-wise freight traffic in 2019-20.

During 2019-20, it contributed around 14.39 billion NTKM to the freight traffic. Besides, the freight earnings stood at about Rs 23.5 billion in 2019-20.

During the time period 2016-17 to 2019-20, the freight traffic and earnings from RMSP grew at a CAGR of 4.92% and 4.45% respectively.

As per the budget estimates, the freight traffic and earnings from RMSP are estimated to be 14.72 billion NTKM and Rs 27.79 billion in 2020-21.

**Trends in Freight Traffic and Earnings from RMSP (2015-16 to 2020-21\*)**



\*Note that figures for 2020-21 are budget estimates. Also, freight earning and traffic figures for 2015-16 were not available.  
 RMSP: Raw Material for Steel Plants, Other goods include commodities such as salt, non-ferrous metals, marble, bamboos and fruits and vegetables  
 Source: Demand for grants analysis, PRS

# Steel

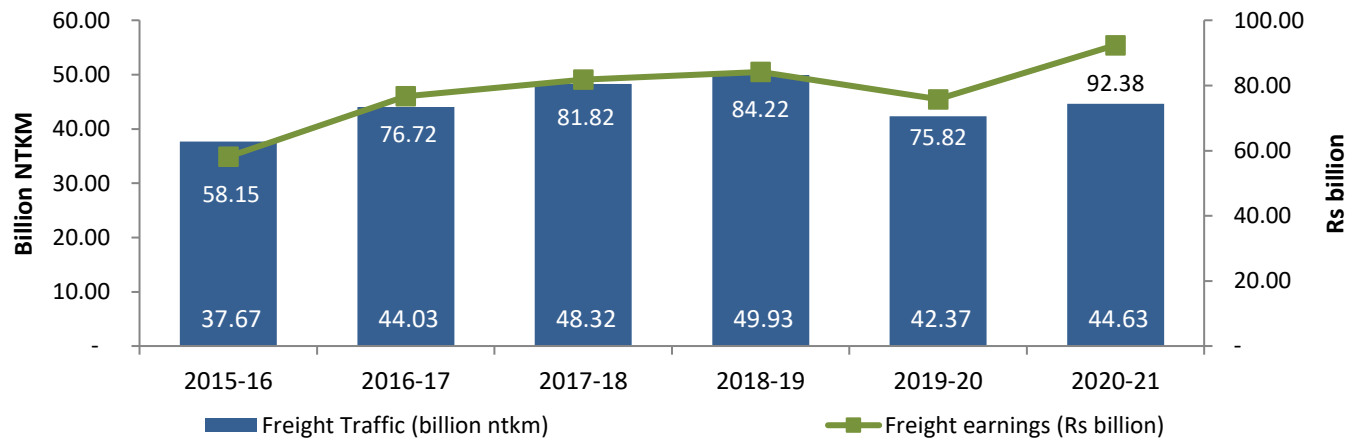
Steel accounted for 6.23% share in the commodity-wise freight traffic in 2019-20.

During 2019-20, it contributed around 42 billion NTKM to the freight traffic.  
Besides, the freight earnings from steel stood at about Rs 76 billion in 2019-20.

During the time period 2015-16 to 2019-20, the freight traffic and earnings from steel grew at a CAGR of 2.98% and 6.86% respectively.

As per the budget estimates, the freight traffic and earnings from steel are estimated to be about 45 billion NTKM and Rs 92 billion in 2020-21.

**Trends in Freight Traffic and Earnings from Steel (2015-16 to 2020-21\*)**



\*Note that figures for 2020-21 are budget estimates.  
Source: Demand for grants analysis, PRS

# Iron Ore

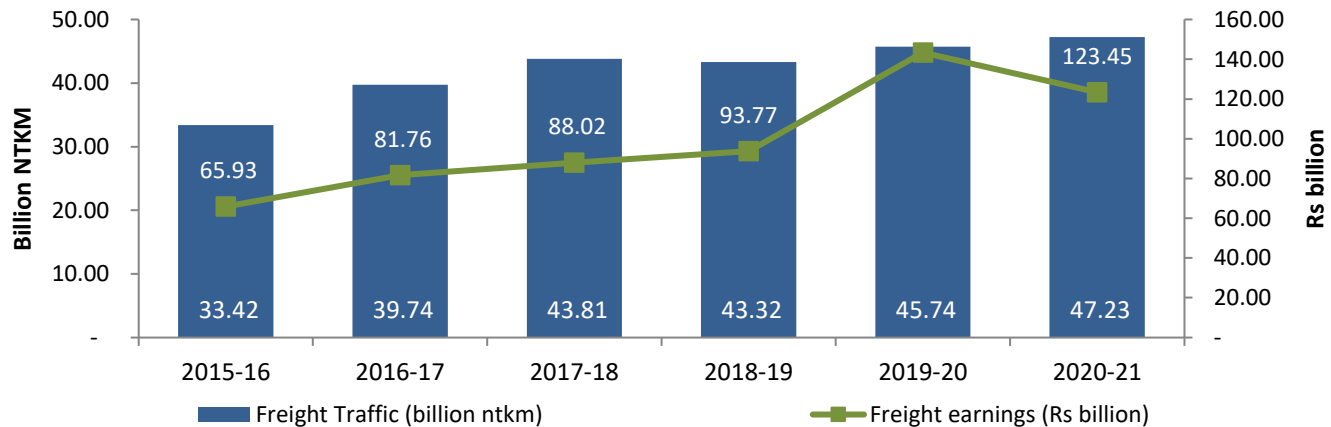
Iron Ore accounted for 6.73% share in the commodity-wise freight traffic in 2019-20.

During 2019-20, it contributed around 46 billion NTKM to the freight traffic.  
Besides, the freight earnings from iron ore stood at about Rs 143 billion in 2019-20.

During the time period 2015-16 to 2019-20, the freight traffic and earnings from iron ore grew at a CAGR of 8.16% and 21.45%.

As per the budget estimates, the freight traffic and earnings from iron ore are estimated to be 47.23 billion NTKM and Rs 123.45 billion in 2020-21.

**Trends in Freight Traffic and Earnings from Iron Ore (2015-16 to 2020-21\*)**



\*Note that figures for 2020-21 are budget estimates.  
Source: Demand for grants analysis, PRS

# Cement

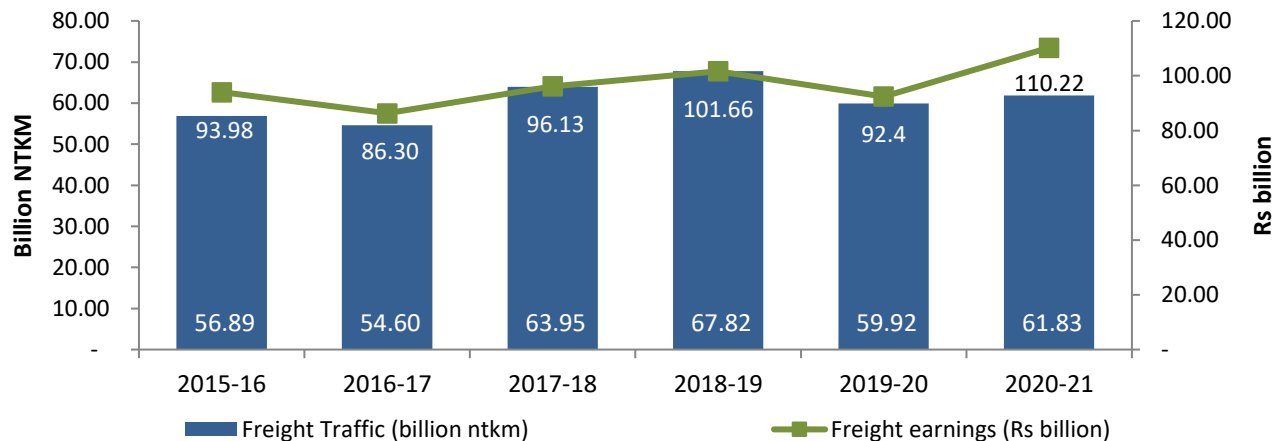
Cement accounted for 8.81% share in the commodity-wise freight traffic in 2019-20.

During 2019-20, it contributed around 60 billion NTKM to the freight traffic.  
Besides, the freight earnings from cement stood at about Rs 92.4 billion in 2019-20.

During the time period 2015-16 to 2019-20, the freight traffic from cement grew at a CAGR of 1.31% whereas earnings fell at a CAGR of 0.42%.

As per the budget estimates, the freight traffic and earnings from cement are estimated to be 62 billion NTKM and Rs 110 billion in 2020-21.

**Trends in Freight Traffic and Earnings from Cement (2015-16 to 2020-21\*)**



\*Note that figures for 2020-21 are budget estimates.  
Source: Demand for grants analysis, PRS

# Foodgrains

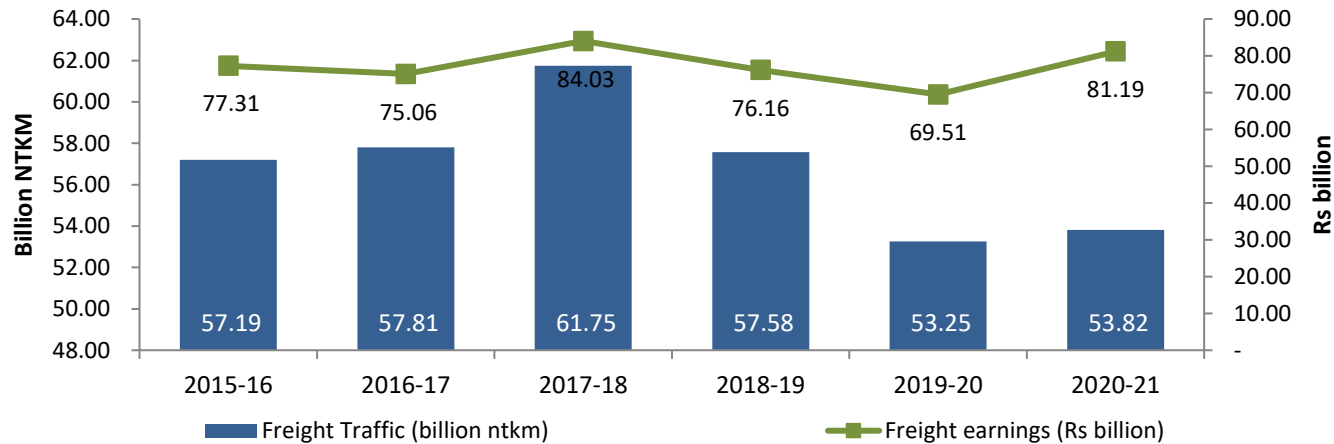
Foodgrains accounted for 7.83% share in the commodity-wise freight traffic in 2019-20.

During 2019-20, it contributed around 53.25 billion NTKM to the freight traffic. Besides, the freight earnings from foodgrains stood at about Rs 70 billion in 2019-20.

During the time period 2015-16 to 2019-20, the freight traffic and earnings from foodgrains fell at a CAGR of 1.77% and 2.62% respectively.

As per the budget estimates, the freight traffic and earnings from foodgrains are estimated to be 54 billion NTKM and Rs 81 billion in 2020-21.

**Trends in Freight Traffic and Earnings from Foodgrains (2015-16 to 2020-21\*)**



\*Note that figures for 2020-21 are budget estimates.  
Source: Demand for grants analysis, PRS

# Fertilisers

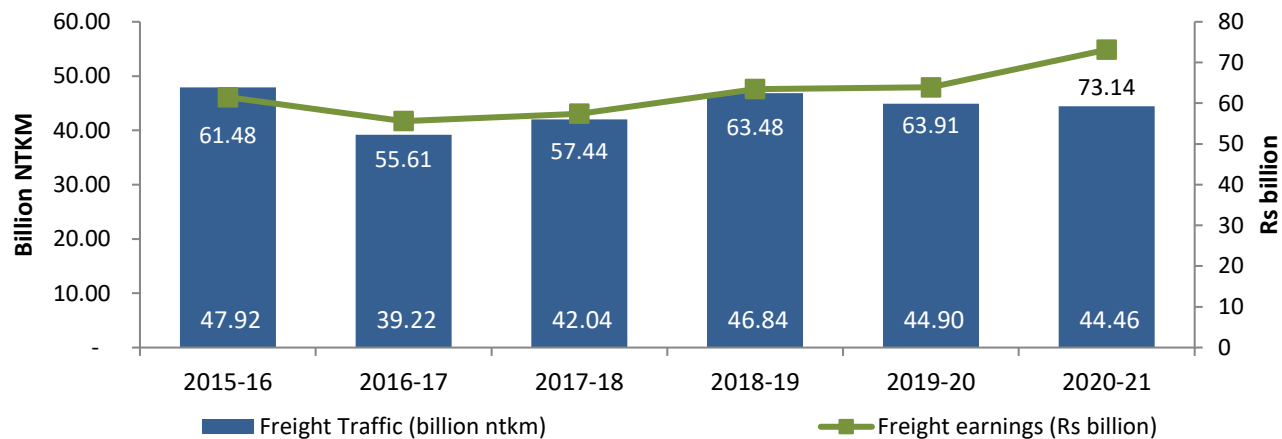
Fertilisers accounted for 6.60% share in the commodity-wise freight traffic in 2018-19.

During 2019-20, it contributed around 45 billion NTKM to the freight traffic.  
Besides, the freight earnings from fertilisers stood at about Rs 64 billion in 2018-19.

During the time period 2015-16 to 2019-20, the freight traffic from fertilisers declined at a CAGR of 1.61% whereas earnings grew at 0.97%.

As per the budget estimates, the freight traffic and earnings from fertilisers are estimated to be 44 billion NTKM and Rs 73 billion in 2020-21.

**Trends in Freight Traffic and Earnings from Fertilisers (2015-16 to 2020-21\*)**



\*Note that figures for 2020-21 are budget estimates.  
Source: Demand for grants analysis, PRS

# Mineral Oil (POL)

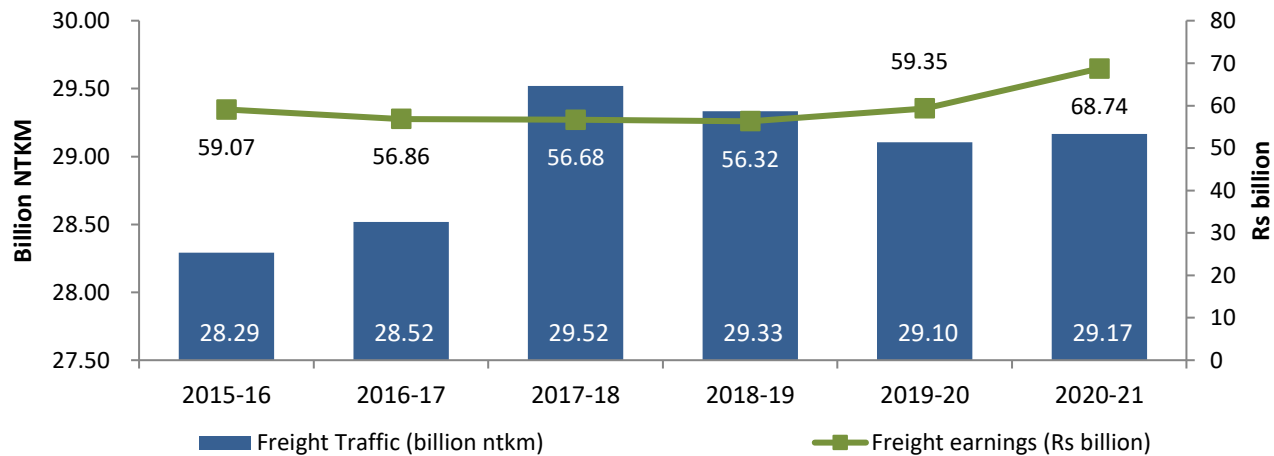
POL accounted for 4.28% share in the commodity-wise freight traffic in 2019-20.

During 2019-20, it contributed around 29 billion NTKM to the freight traffic. Besides, the freight earnings from POL stood at about Rs 59.35 billion in 2019-20.

During the time period 2015-16 to 2019-20, the freight traffic and earnings from POL grew at a CAGR of 0.71% and 0.12% respectively.

As per the budget estimates, the freight traffic and earnings from POL are estimated to be 29.17 billion NTKM and Rs 69 billion in 2020-21.

Trends in Freight Traffic and Earnings from Mineral Oil (2015-16 to 2020-21\*)



\*Note that figures for 2020-21 are budget estimates.  
Source: Demand for grants analysis, PRS

# Container Services

Container services accounted for 7.93% share in the commodity-wise freight traffic in 2019-20.

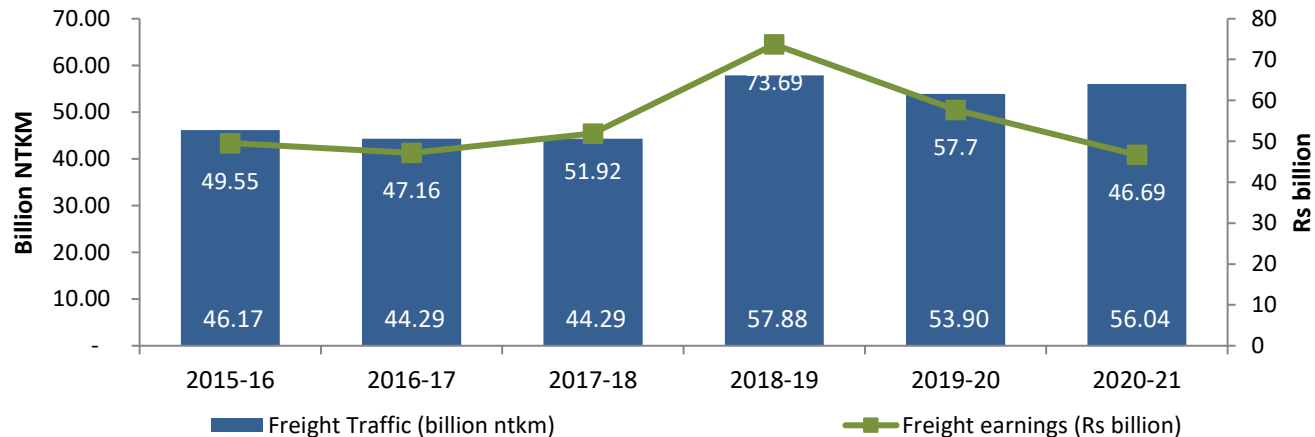
During 2019-20, it contributed around 54 billion NTKM to the freight traffic.

Besides, the freight earnings from container services stood at about Rs 58 billion in 2019-20.

During the time period 2015-16 to 2019-20, the freight traffic and earnings from container services grew at a CAGR of 3.95% and 3.88%.

As per the budget estimates, the freight traffic and earnings from container services are estimated to be 56 billion NTKM and Rs 47 billion in 2020-21.

**Trends in Freight Traffic and Earnings from Container Services (2015-16 to 2020-21\*)**



\*Note that figures for 2020-21 are budget estimates.  
Source: Demand for grants analysis, PRS

# Balance Goods

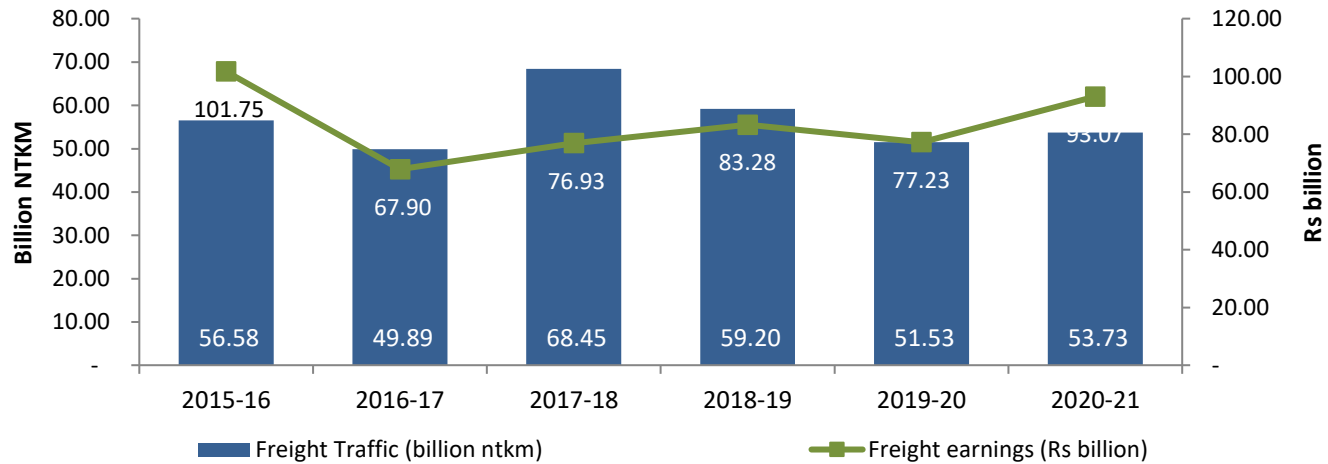
Balance goods accounted for 7.58% share in the commodity-wise freight traffic in 2018-19.

During 2019-20, it contributed around 51.5 billion NTKM to the freight traffic.  
 Besides, the freight earnings from balance goods stood at about Rs 77 billion in 2019-20.

During the time period 2015-16 to 2019-20, the freight traffic and earnings from balance goods declined at a CAGR of 2.31% and 2.2% respectively.

As per the budget estimates, the freight traffic and earnings from balance goods are estimated to be 54 billion NTKM and Rs 93 billion in 2020-21.

**Trends in Freight Traffic and Earnings from Balance Goods (2015-16 to 2020-21\*)**



\*Note that figures for 2020-21 are budget estimates.  
 Source: Demand for grants analysis, PRS

## Impact of Covid-19 on Performance of Commodities in 2020-21



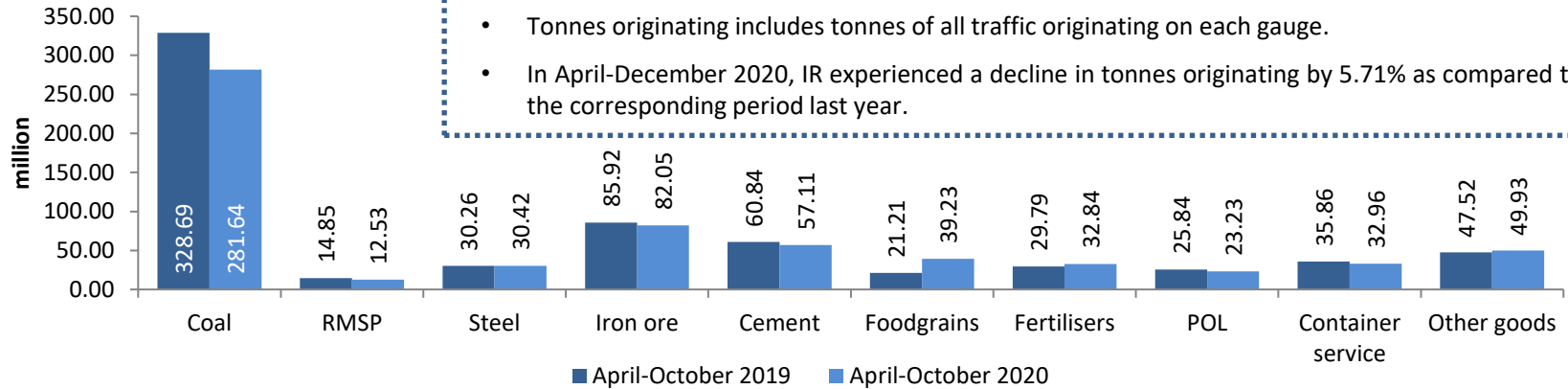
Due to the outbreak of Covid-19 pandemic, there has been a substantial decline in YoY freight traffic and earnings during April-October 2020 to the tune of 5.71% and 13.29% respectively.

However, this decline is largely due to the loss in freight traffic and earnings in the initial phase of the nationwide lockdown. Over the months, the figures have seen a rise as compared to the previous year figures.

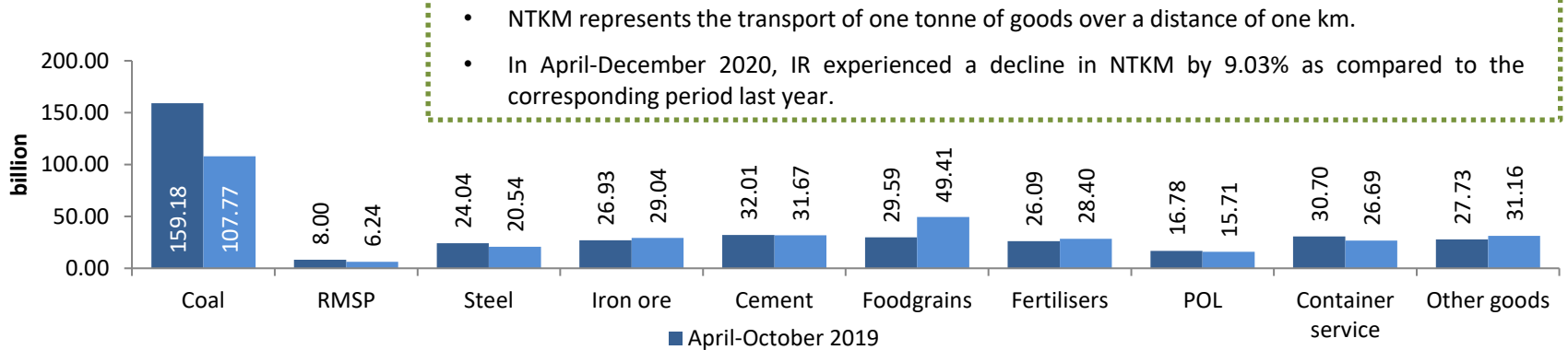
During October 2020, the freight traffic and earnings of IR were higher by 15.39% and 9.23% respectively, as compared to the corresponding period last year.

# Impact of Covid-19 on Performance of Commodities in 2020-21

## Tonnes Originating



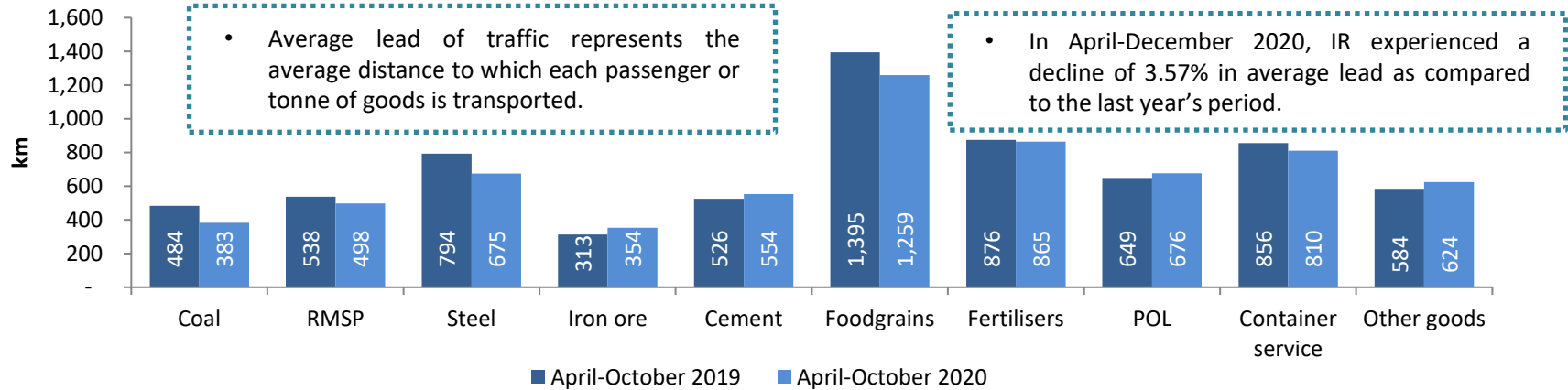
## NTKM



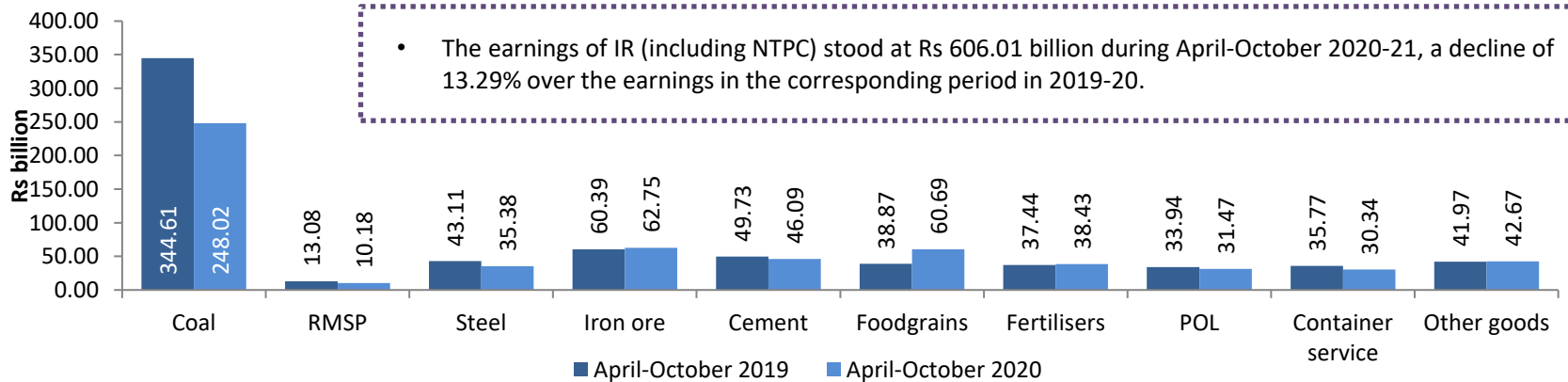
Source: Ministry of Railways

# Impact of Covid-19 on Performance of Commodities in 2020-21

## Average Lead



## Earnings

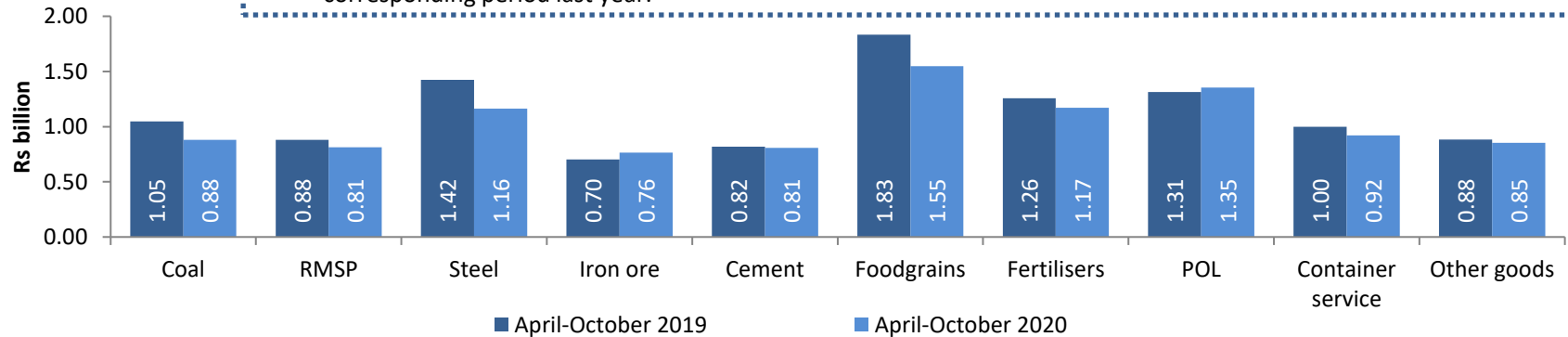


Source: Ministry of Railways

# Impact of Covid-19 on Performance of Commodities in 2020-21

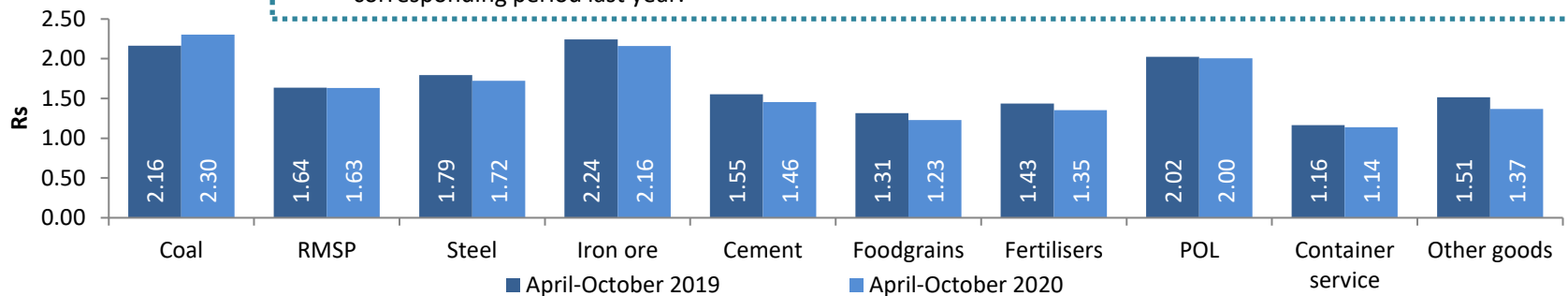
## Earnings per million tonne

- In April-December 2020, IR experienced a decline in earnings per million tonnes by 8.04% as compared to the corresponding period last year.



## Earnings per NTKM (paise)

- In April-December 2020, IR experienced a decline in earnings per NTKM by 4.68% from as compared to the corresponding period last year.



Source: Ministry of Railways

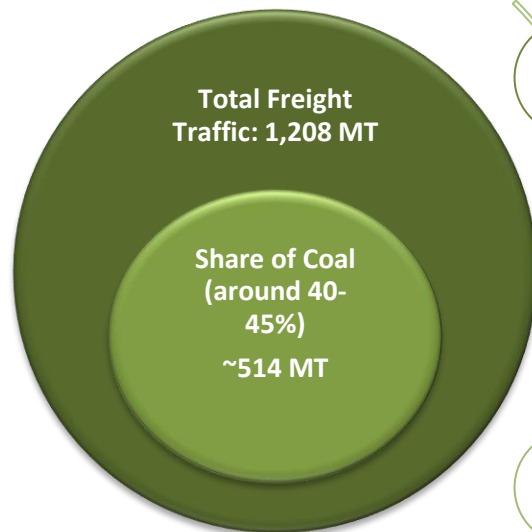
## Future Projections and Outlook

Although the outbreak of pandemic had affected the freight traffic carried by IR in the first half of 2020-21, the impact has not been substantial as IR witnessed a decline of only 9% during April-September 2020.

As the freight traffic is returning to the 2019-20 levels, even exceeding it in the past couple of months, *India Infrastructure Research* estimates the overall freight traffic for 2020-21 to reach at most 2019-20 levels.

The complete recovery in the freight traffic by the end of current fiscal year can be attributed to IR's timely response to introduce a slew of measures to boost the freight traffic during the lockdown.

### Share of Commodities in Freight Traffic 2020-21

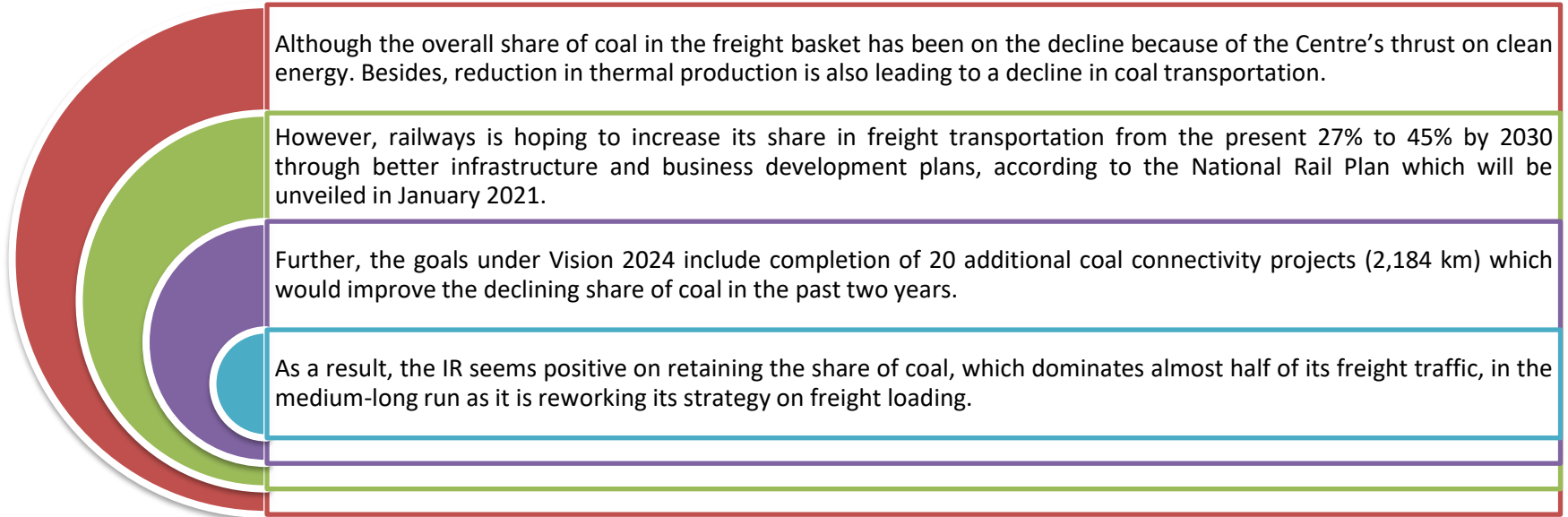


- In October 2020, IR loading was 108.16 MT, which is 15% higher compare to last year's loading for the same period.
- Of which, the share of coal stood at 44% (46.97 MT), followed by iron ore at 14% (14.68 MT), 5% (5.03 MT) of foodgrains, 5.5% (5.93 MT) of fertilisers and 6% (6.62 MT) of cement (excluding clinker).
- This reflects a revival in the share of commodities in the freight traffic, to the 2019-20 levels.
- The growth in freight traffic has been driven by movement of items from the core sectors i.e. coal, cement, fertilizer, as well as foodgrains.

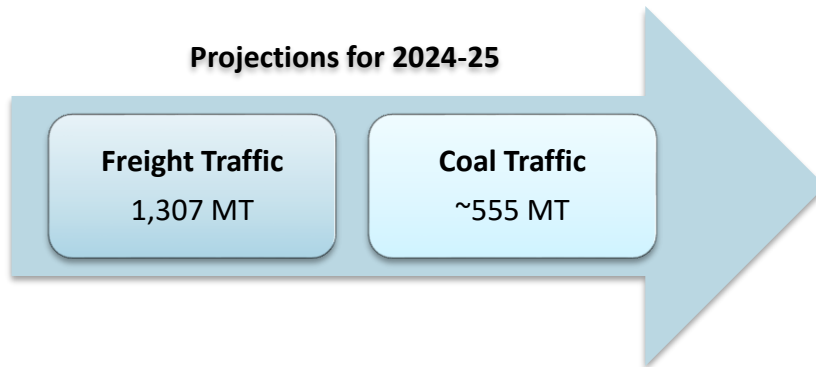
Source: India Infrastructure Research

# Future Projections and Outlook

## Retaining the Share of Coal in Freight Traffic 2024-25



### Projections for 2024-25



In view of the initiatives and plans of IR towards increasing freight traffic as well as retaining coal’s share in the freight, it has been projected to be ~555 MT in 2024-25.

Please refer to Chapter 6 for details on freight projection.

Source: India Infrastructure Research