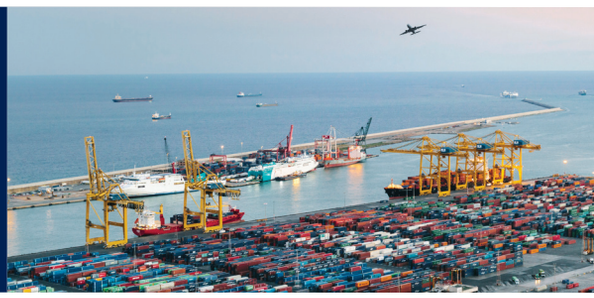
KUEHNE+NAGEL

WHITE PAPER



IMO 2020 OUTLOOK

WHAT IS IMO 2020?

From January 1st 2020 onwards, all **seagoing vessels will have to reduce sulphur oxides by 85%**. The new regulation is set by the International Maritime Organisation (IMO) with the aim of reducing greenhouse gas emissions, protecting public health and supporting the environment.

The regulation will apply globally and throughout the industry to fuels used in the open sea. Vessels must use marine **fuels with a maximum sulphur content of 0.5%** compared to the current limit of 3.5%.

WHAT ARE THE CHALLENGES OF IMO 2020?

The prospect of IMO 2020 has resulted in a high level of uncertainty about **availability of petroleum products and pricing**. It will affect vessel operators, refineries, and global oil markets.

Vessel operators have the following choices to comply with the new IMO 2020 sulphur limits:

1. **Use scrubbers (emission cleaning technology)** to remove pollutants from the ship's exhaust, which allows them to continue using higher-sulphur fuels

However, the process of installing scrubbers is limited and expensive due to space and capacity constraints and will increase operating costs. In addition, the price and availability of higher-sulphur fuels after 2020 remains uncertain. Amongst others, China and Singapore have already banned open-loop scrubbers in inland port waters and coastal shipping ECAs because the environmental benefits are questionable.

2. **Switch to non-petroleum-based fuels such as liquefied natural gas (LNG)** for newer vessels with appropriate specifications

However, the infrastructure to support the use of LNG is currently limited in scope and availability. Experts predict that by 2020 approximately 250-500 vessels, or a maximum of 10% of the global container fleet, will either be equipped with pollution cleaning technology or will be able to burn LNG.

3. **Switch to a Very Low Sulphur Fuel (VLSF)** that complies with the new rules (Most likely choice)

However, the cost, widespread availability and specifications of a new fuel for use in marine engines are still uncertain. The petroleum industry needs to adapt refineries and supply chains and is likely to pass these costs on to the market.

WHAT ARE IMPACTS AND RISKS?

It is currently not possible to indicate an amount for the future price levels for VLSF. At this stage all we can predict is that it will **cost more than currently available fuels**.

Today's forecast assumes a **short- to midterm increase in bunker prices** between US$ 180 and US$ 400 per TEU. Due to the significant increase in bunker prices, every company involved in sea freight will be confronted with rising transportation costs. When IMO 2020 comes into effect **transportation services may be disrupted** as a result of inadequate fuel quality, which may lead to engine failures or insufficient availability of compliant bunker fuels.

POSITIONING OF KUEHNE + NAGEL

**The shipping industry must prepare for a future with lower transport emissions.
Kuehne + Nagel welcomes any industry approach to improve environmental protection and fully supports this initiative. IMO 2020 will ensure that ocean transportation remains the most environmentally friendly and carbon efficient mode of transportation.**

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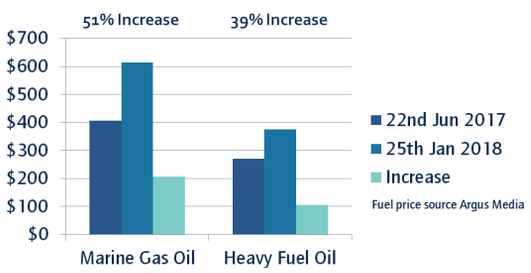
WHAT WILL BE THE IMPACT ON FREIGHT RATES?

According to current calculations, the expected increase in costs will have a significant impact on the overall prices of container transportation and on freight rates. Whilst the implementation date for IMO 2020 is January 1st 2020, we anticipate freight rates to increase as early as the end of the third quarter of 2019.

Therefore, long-term agreements for both full and part load containers will include a price adjustment method also known as **Bunker Adjustment Factor**. Your local Kuehne + Nagel representative will provide you with further details on it.

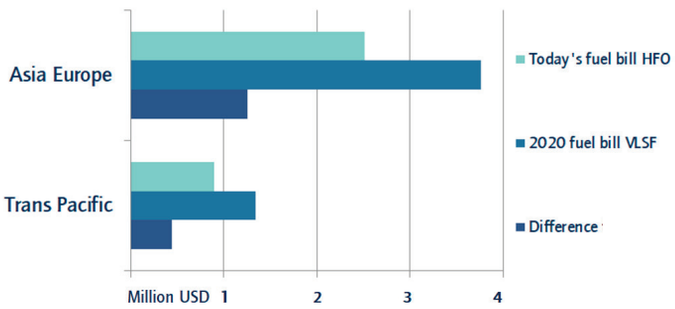
EXEMPLARY MARKET PRICE RISK OVER A HALF-YEAR PERIOD

Average prices Singapore / Rotterdam



KEY TAKE AWAY - RISE IN FUEL COSTS

Calculation examples	Trans Pacific	Asia Europe
• Standard tonnage in use	13k TEU	20k TEU
• Slow steaming	max. 18kn	max. 18kn
• Consumption	160 mt/day	190 mt/day
• Sea days	14	33
• Total consumption	2,240 mt	6,270 mt
• Today's fuel bill HFO á 400 USD	896k USD	2,508k USD
• 2020 fuel bill VLSF á 600 USD	1,344k USD	3,763 USD
Price difference/Additional costs	**0.44 Mio USD**	**1.25 Mio USD**



In order to offset price risks associated with the foreseeable increase in freight costs for new fuels, Kuehne + Nagel is currently working on a fixed bunker scheme that will be available for certain volume contracts at competitive prices.

KUEHNE + NAGEL IS AT YOUR SERVICE TO MASTER IMO 2020

Our ultimate goal as Kuehne + Nagel is to run our customer's business best in class without disruptions but at competitive prices. As the world's largest sea freight service provider, we are ideally positioned to respond to the challenges related to IMO 2020.

We provide you with up-to-date information, transparency and security and enable you to react appropriately to possible disruptions in your supply chain. Our experts will constantly strive to successfully solve potential IMO 2020 challenges for you.