

# IMO 2020

## Petrobras view

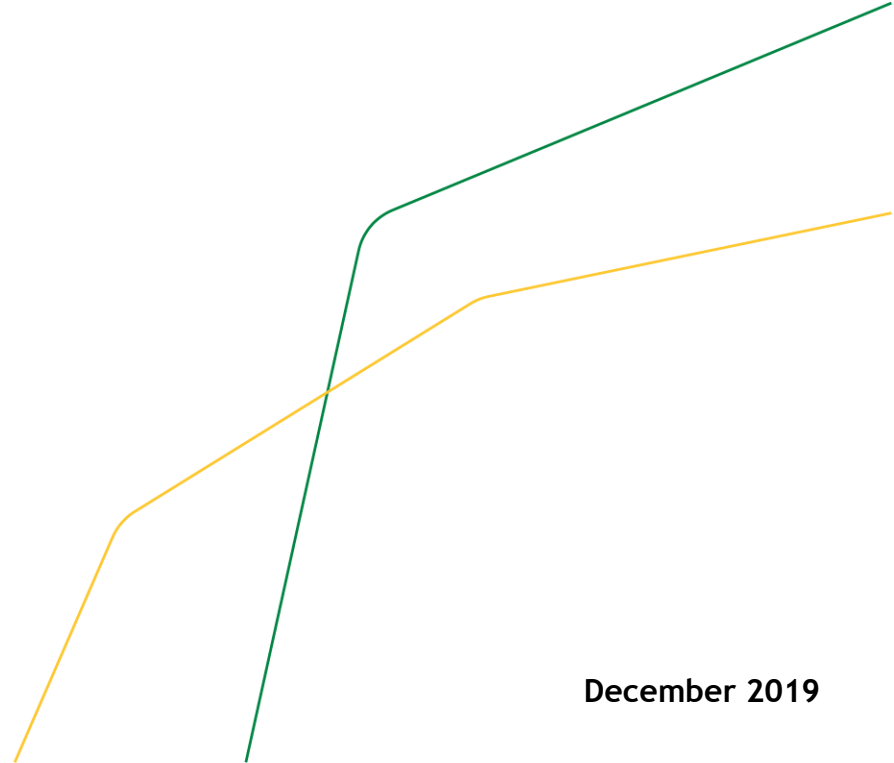
**Claudia Sousa**

General Manager

Domestic Market - Dirty Products

*Due to Agenda incompatibility, Claudia Valeria Carreiro de Sousa was delegated by Claudio Mastella to this panel.*

**December 2019**





## FORWARD-LOOKING STATEMENTS:

### DISCLAIMER

The presentation may contain forward-looking statements about future events within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, that are not based on historical facts and are not assurances of future results. Such forward-looking statements merely reflect the Company's current views and estimates of future economic circumstances, industry conditions, company performance and financial results. Such terms as "anticipate", "believe", "expect", "forecast", "intend", "plan", "project", "seek", "should", along with similar or analogous expressions, are used to identify such forward-looking statements. Readers are cautioned that these statements are only projections and may differ materially from actual future results or events. Readers are referred to the documents filed by the Company with the SEC, specifically the Company's most recent Annual Report on Form 20-F, which identify important risk factors that could cause actual results to differ from those contained in the forward-looking statements, including, among other things, risks relating to general economic and business conditions, including crude oil and other commodity prices, refining margins and prevailing exchange rates, uncertainties inherent in making estimates of our oil and gas reserves including recently discovered oil and gas reserves, international and Brazilian political, economic and social developments, receipt of governmental approvals and licenses and our ability to obtain financing.

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In addition, this presentation also contains certain financial measures that are not recognized under Brazilian GAAP or IFRS. These measures do not have standardized meanings and may not be comparable to similarly-titled measures provided by other companies. We are providing these measures because we use them as a measure of company performance; they should not be considered in isolation or as a substitute for other financial measures that have been disclosed in accordance with Brazilian GAAP or IFRS.

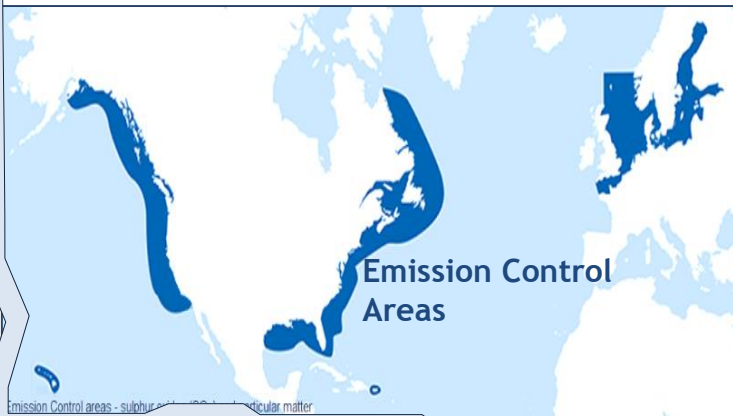
### NON-SEC COMPLIANT OIL AND GAS RESERVES:

#### CAUTIONARY STATEMENT FOR US INVESTORS

We present certain data in this presentation, such as oil and gas resources, that we are not permitted to present in documents filed with the United States Securities and Exchange Commission (SEC) under new Subpart 1200 of Regulation S-K because such terms do not qualify as proved, probable or possible reserves under Rule 4-10(a) of Regulation S-X.

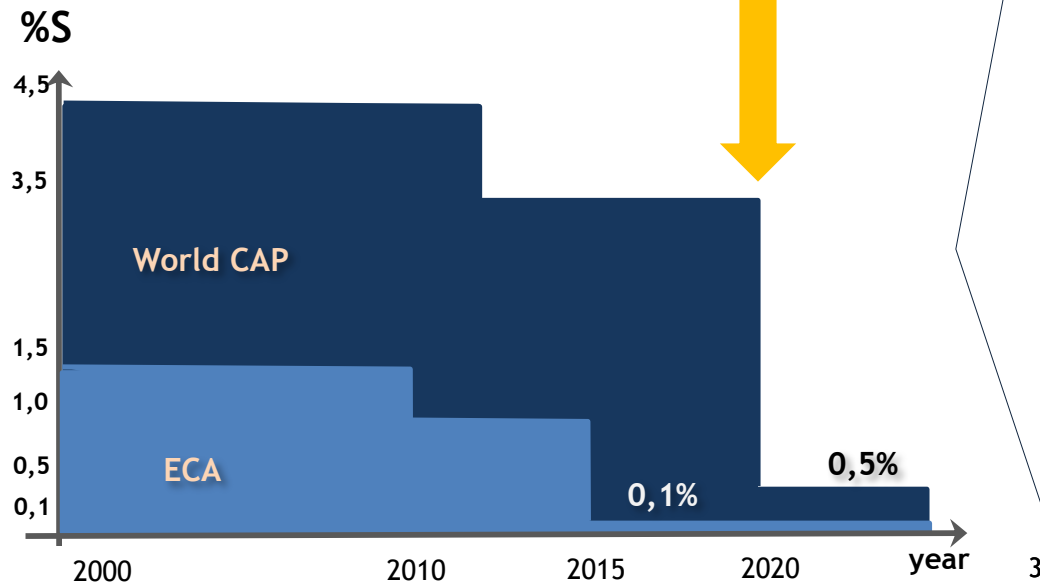


IMO will enforce a new 0.5% global sulphur content cap on fuel from 1st January 2020. Marine fuels in Emission Control Areas (ECA) remain limited to 0.1% S.



## Annex VI - MARPOL Pollution Prevention from Ships

Approval in October 2016  
Marine Environment Protection  
Committee 70th session (MEPC70)



# Market Overview

Comercial World Fleet  
> 90 thousand ships

GNL/Scrubbers  
low penetration

Refining investments  
not sufficient for coking of HSFO  
surplus and not relevant for its  
desulphurization

Bunker 2020 = Mixing of fuels:  
LSFO, gasoils, diesel.



HSFO replacement  
**90** million mt  
in bunker market

Shipping  
↑ WS

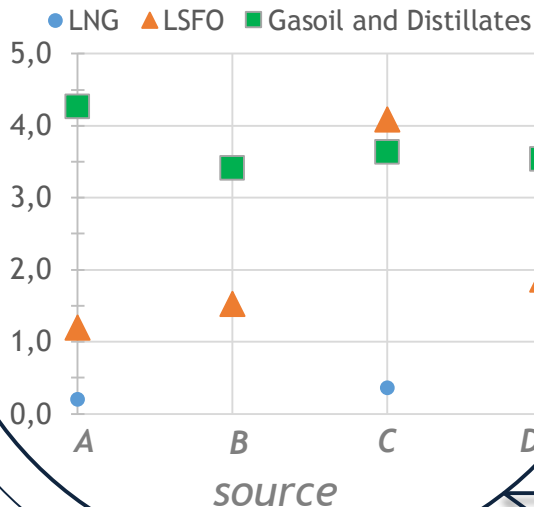
Spread 0.5%S vs. 3.5%S  
↑ 48 usd/bbl (~300 usd/t)

Increase in diesel demand  
↑ 15 usd/bbl ULSD

Refining margins

↑ 50%- 100%  
mainly for complex systems

## Compliant fuel/HSFO ratio



High impact in diesel markets

Increase in  
global demand  
more than

**4x**

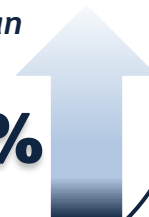
historical average

price  
pressure  
in distillates

Brazilian LSFO exports

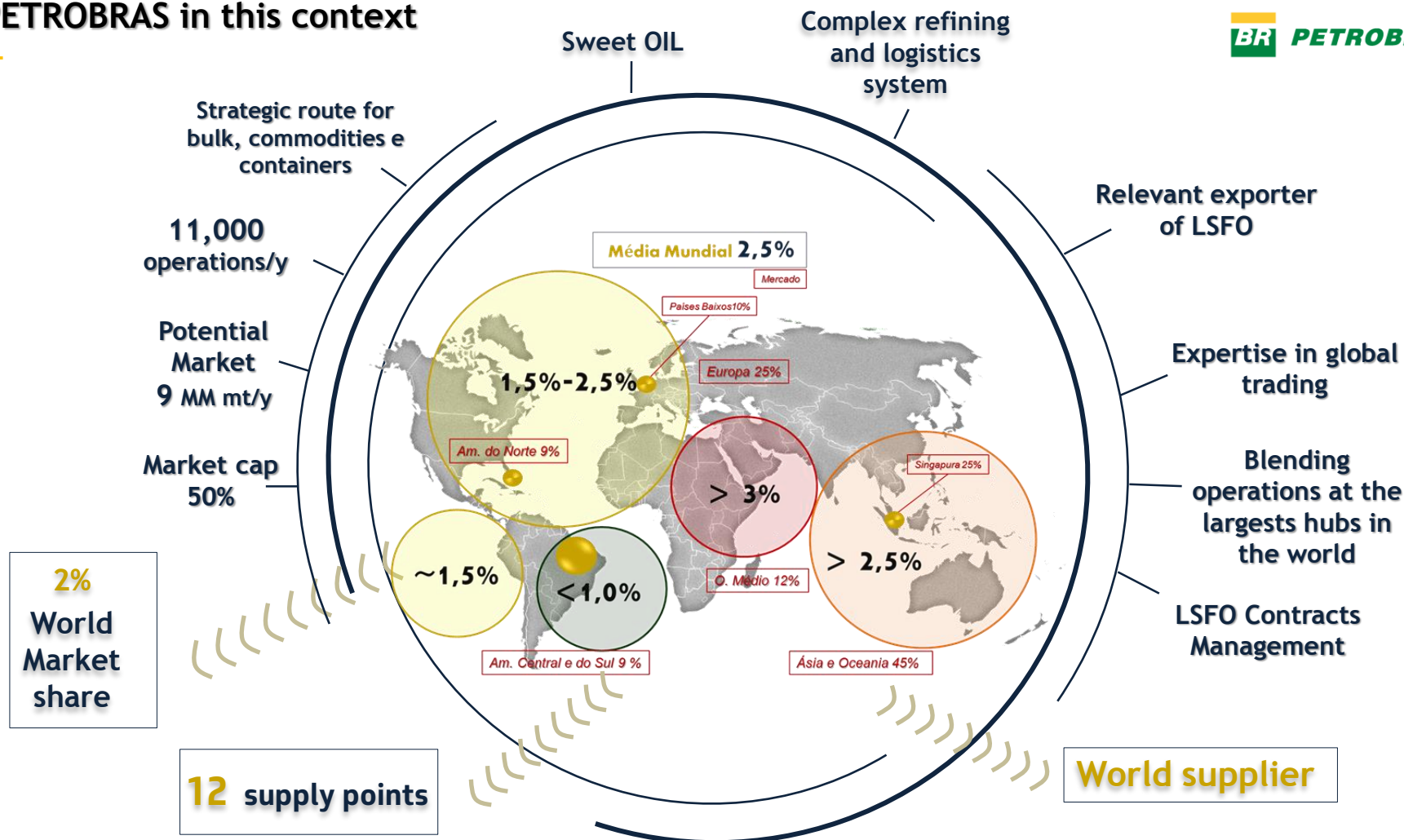
May increase  
more than

**50%**

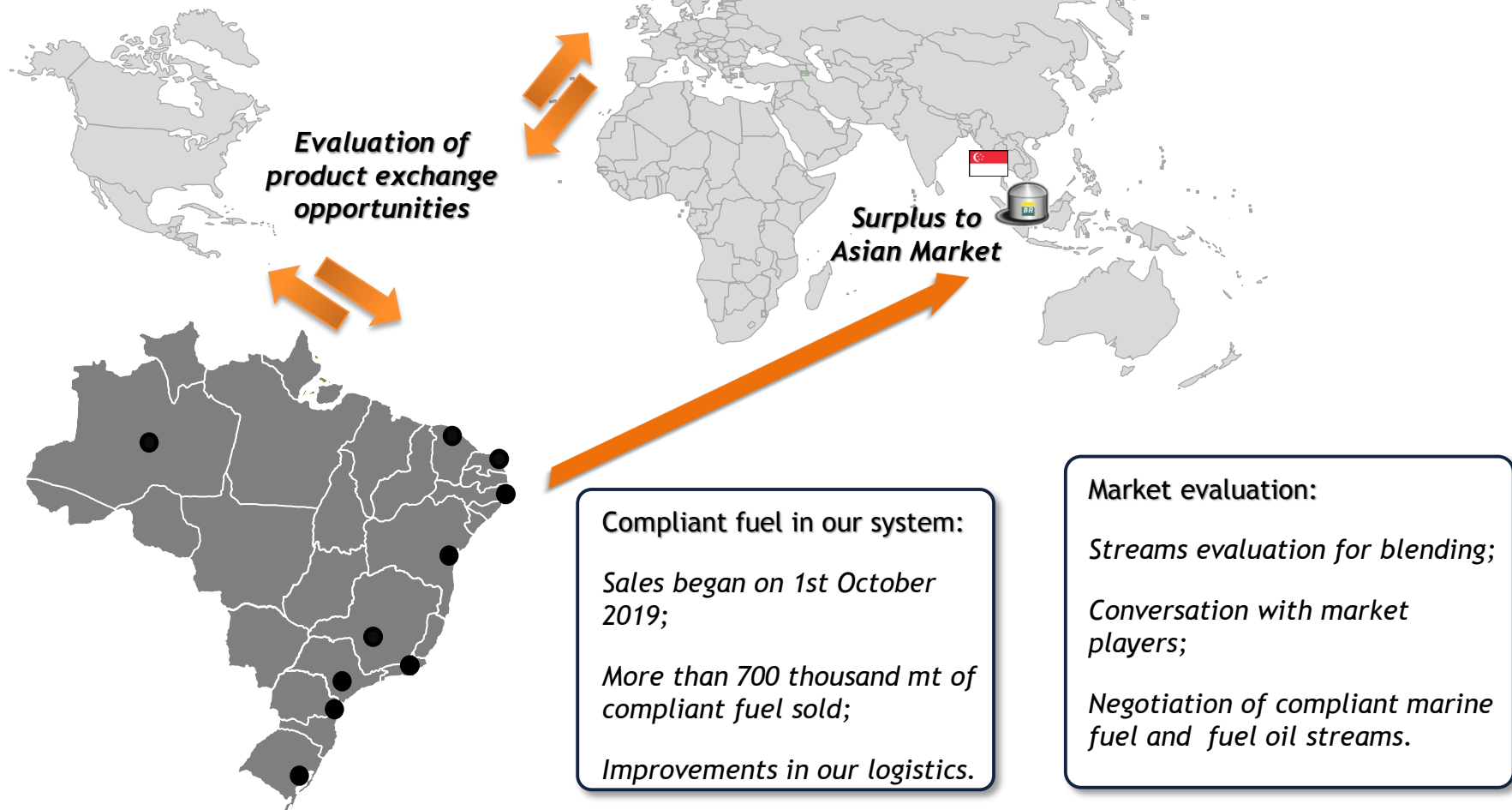


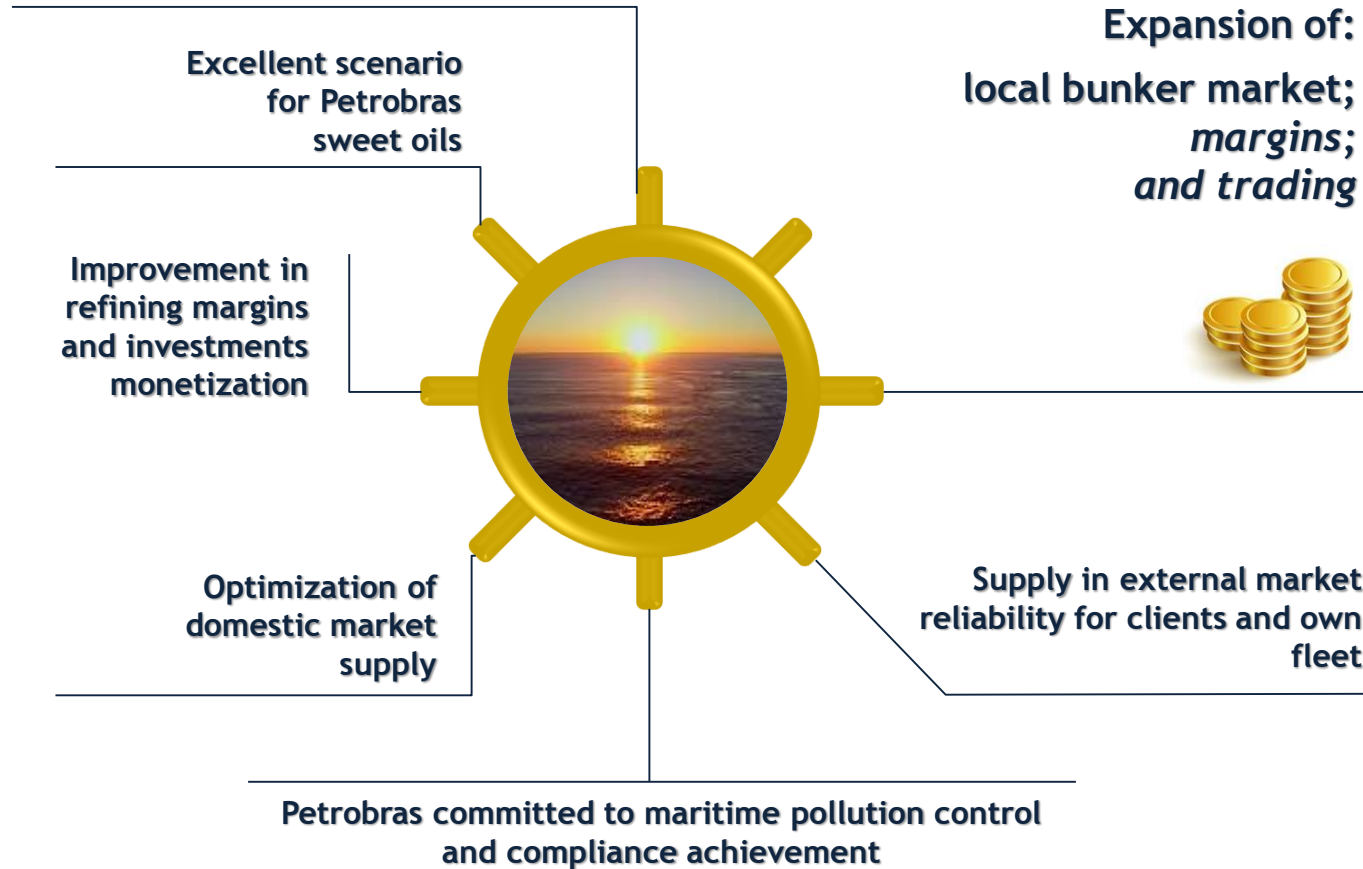
**Rational:** LSFO be valued at  
gasoil price levels

# PETROBRAS in this context



# Petrobras on compliance







Thank you !!