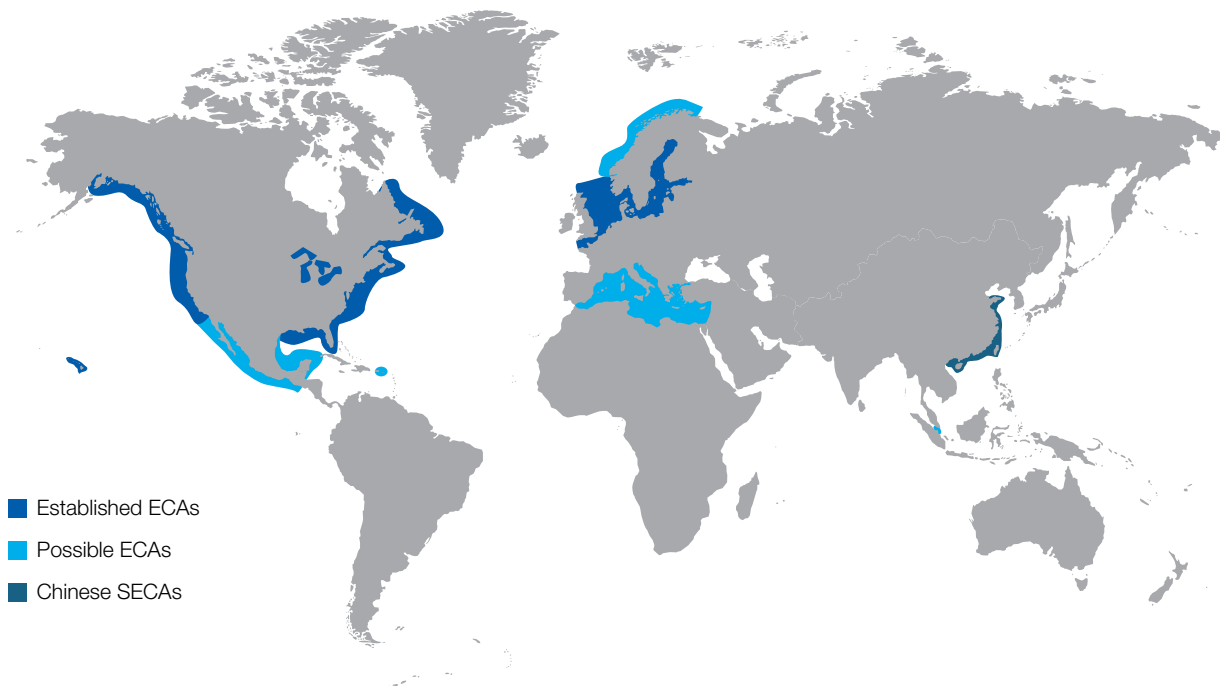


FIG.36 MARINE FUEL SULPHUR SPECIFICATIONS

SULPHUR EMISSION CONTROL AREAS (SECAs)

Source: IMO and Concawe



The limit for the sulphur content of marine fuels in SECAs is 0.1% since 1 January 2015.

The limit for the sulphur content of marine fuels outside SECAs in the EU waters is set at 0.5% for EU waters from 2020.

Since January 2015, all vessels in the Emission Controlled Area (ECA) of the Baltic Sea, North Sea, English Channel and waters 200 nautical miles from the coast of US and Canada, have had to reduce their sulphur emissions to 0.1%.

From 1 January 2019, vessels have been required to use fuel with a sulphur content not exceeding 0.5% while operating

within the Coastal ECA, i.e. within China's territorial sea (including the Hainan Coastal ECA) as well as Hong Kong, Taiwan and Mainland China.

From 1 January 2020, the new 0.5% global sulphur cap entered into force replacing the previous limit of 3.50% which had been in effect since 1 January 2012.

From 1 January 2022, vessels must use fuel with a sulphur content not exceeding 0.1% while operating within the Hainan Coastal ECA. Vessels are required to use either a distillate, an alternate fuel or install a scrubber that removes sulphur from the exhaust after combustion.