

# Exhaust Gas Cleaning System (EGCS)

Position

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Implement a global standard for wash water discharges from Exhaust Gas Cleaning Systems (EGCS).

## Why is this important?

A lot of ships have been or are being equipped with an Exhaust Gas Cleaning System (EGCS). An EGCS is a system that as the name suggests washes sulphur out of the ships exhaust gasses. An EGCS has several additional advantages:


- Besides washing out sulphur an EGCS will also wash out particulate matter from the exhaust gasses.
- An EGCS in combination with a CO<sub>2</sub> capture system can currently remove up to 30% of CO<sub>2</sub>, and probably soon around 80%.
- When looking at the well-to-wake life cycle, combining high-sulphur heavy fuel (HFO with 0,5% sulphur) with an EGCS has a lower footprint then a ship using low-sulphur heavy fuel (HFO with -0,1% sulphur or diesel oil)

For the climate, an EGCS appears to be a relatively good solution. But EGCS has been put under the magnifying glass because the use of 'wet EGCS' result in discharge water. This discharge water contains harmful components that have been washed out of the exhaust gasses. This water used for cleaning the exhaust gasses will usually be post-treated and cleaned until it is in compliance with the set standards. After which, depending on the EGCS, will be discharged. Environmental organisations and several coastal states are nonetheless quite concerned about the effect that post-treated EGCS discharged water will have on the marine environment when discharged in sea.

# Key terms

## Sulphur content



The **MARPOL**  Convention requires that the sulphur content of fuel used on board a ship is not allowed to exceed 0.5% m/m. This standard is also known as the "Sulfur standards are legal regulations that limit the maximum amount of sulfur in fuels for ships and other vehicles."> .

## SECA



That MARPOL Convention also designated so-called emission control areas (ECAs), a kind of environmental zone. Thus, sulphur oxides ECAs (SECAs) have been established for several areas (waters) around the world. The North Sea area is one of such an SECA.

In a SECA, a more stringent sulphur standard applies than the 'global' sulphur standard that applies outside SECAs. For a SECA, that stricter 'sulphur standard' means that when a ship sails within the SECA, the sulphur content of the fuel oil used on board that ship must not exceed 0.1% m/m.

## EGCS



To meet the 'sulphur standard' in an SECA, ships must in the beginning use so-called low-sulphur fuel. But it can also be done in a different way. This is because the MARPOL Convention allows 'equivalent facilities' if they are at least as effective as that sulphur standard. An EGCS is one of those equivalent facilities.

An EGCS washes the sulphur out of a ship's engine exhaust. That way, the ship also meets the 'sulphur standard' (0.5% outside and 0.1% inside SECAs). The emission of sulphur oxides is even significantly lower than the set sulphur standards when using an EGCS.

An EGCS can wash exhaust gases in a dry manner using solid lime as an alkaline scrubbing material ('dry EGCS') or in a wet manner using water ('wet EGCS'). And wet EGCS can be divided into open-loop EGCS, closed-loop EGCS or a hybrid EGCS.

An open-loop EGCS uses seawater as wash water. A closed-loop uses seawater or freshwater with a chemical additive (caustic soda or limestone) as wash water.

When the ship uses an open-loop EGCS it will use seawater to clean the exhaust gasses. The seawater enters the vessel through a sea inlet and passes through the EGCS. The water that has gone through the EGCS will contain the sulphur from the exhaust gasses and has thus become filthy washwater. This washwater goes through a treatment system to be post treated after which it will be discharged.

The IMO has set standards which the discharge water must meet before it is actually allowed to be discharged into the surface water. These requirements and criteria are in the IMO 2021 Guidelines for exhaust gas cleaning systems.

## How should we solve it?

In this discussion about the effects of discharge water, the KVMR is of the belief that the focus should be on the quality of the post-treated wash water and not on the EGCS system itself.

There should not be global, regional or local ban on the discharging of post-treated washwater from EGCS.

Coastal states or port states that have nonetheless introduced or are considering regional or local bans on the discharge of EGCS post-treated water should:

- Not base this ban purely on the 'precautionary principle';
- First conduct an environmental risk and impact assessment, in accordance with the applicable IMO guidelines; and
- Make the results of that environmental risk and impact assessment publicly available.

If the discharged water from EGCS is found to be the cause of excessive pollution of surface water, then:

The criteria set by IMO (in section 10 of the IMO EGCS Directive) for the EGCS post-treated washwater to be discharged be made more stringent; and

- The starting principle should be a more strict criteria for the discharge water of EGCS;
- These new principles should apply to newly installed EGCS from a certain date onward; and
- Not apply retrospectively to EGCS that are already installed in accordance with the current rules.





## State of affairs - February 05, 2025

### Local



At the local level, an increasing number of local ports, port states and coastal states are considering a complete ban on the discharge of post-treated wash water. Some coastal states have already imposed a ban in their territorial waters. Several port states have already imposed a ban in their ports. There will soon be a module in **IMO** + GISIS listing all local and regional restrictions.

### Regional



At regional level, some coastal states are jointly considering banning the discharge of post-treated wash water. A number of coastal states around the North-East Atlantic that are part to the Convention for the Protection of the Marine Environment of the North-East Atlantic (the 'OSPAR Convention') are considering banning the discharge of post-treated wash water from EGCS in all their territorial waters. This will be discussed further during 2025.

At the global level, the discharge of post-treated wash water from EGCS is on the IMO's agenda.

At the 81st meeting of the IMO Environment Committee (MEPC) + in March 2024, it was determined that EGCS can continue to be used to comply with sulphur standards. It was also concluded that individual member states have the right to act unilaterally against the use of EGCS in their own territorial waters. However, they cannot impose stricter requirements in their Exclusive Economic Zone (EEZ) + than international rules and standards without agreeing this within the IMO.

At the 12th meeting of the IMO Sub-Committee on Pollution Prevention and Control (PPR) in February 2025, it was agreed that the UN advisory body GESAMP will work to determine the emission factors of any pollutants present in wash water. Once those are established then coastal states can then conduct a proper environmental risk assessment (of the impact of discharged washwater from an EGCS in their waters). Once those emission factors are established then coastal states can conduct a proper environmental risk analysis (of the impact of discharged washwater from an EGCS in their waters). So far, those coastal states concerned about the washwater have done almost no environmental risk analyses in accordance with the IMO guidelines intended for that purpose.

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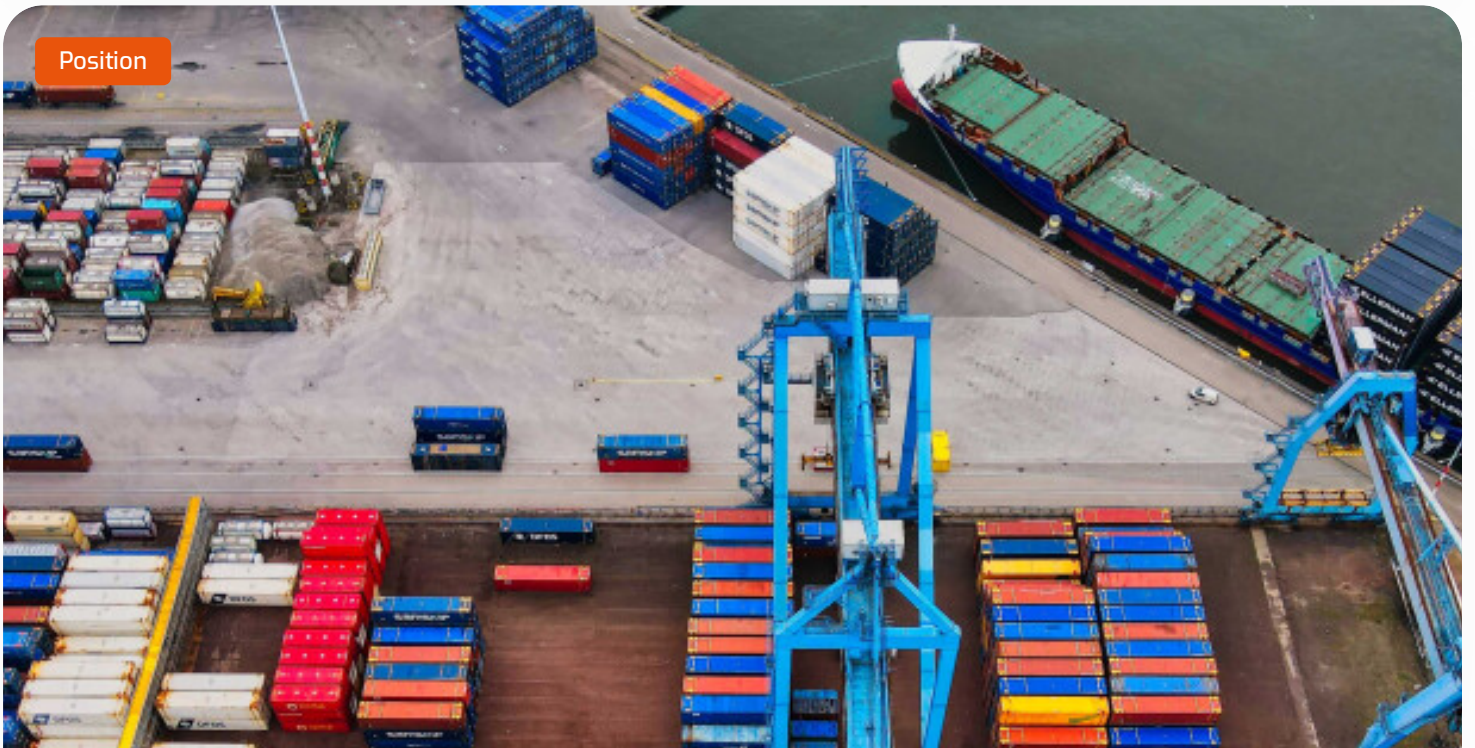


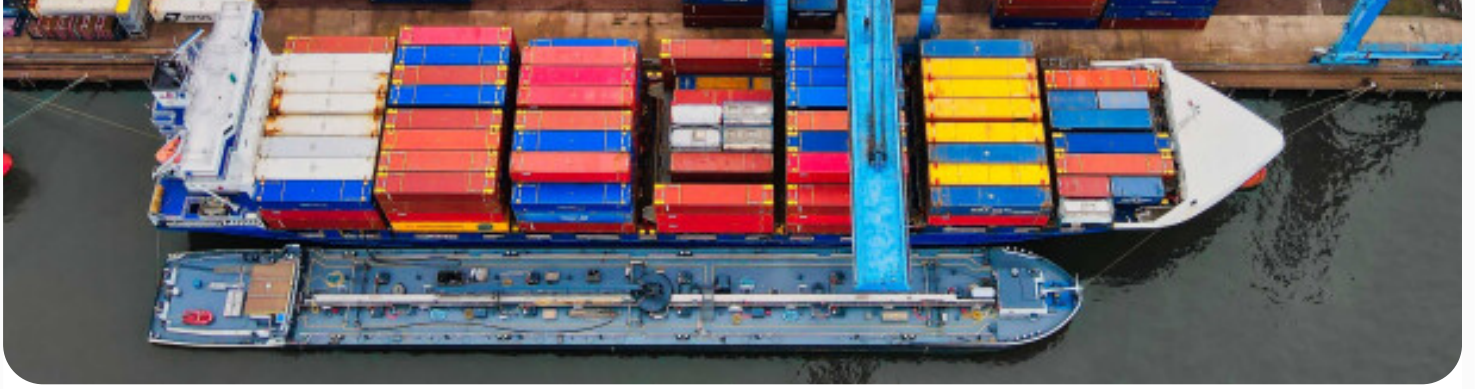


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