IMPACT OF EU ETS (EMISSIONS TRADING SYSTEM) IMPLEMENTATION MEASURES UNDER THE "FIT FOR 55" PACKAGE

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When a new measure is approved, the first thing we should ask legislators to do is define (quantifiably, if possible) its objective. Secondly, we should ask if the final approved proposal meets the objective as designed. If it is also efficient and generates minimum costs for the system, even better.

Second idea. The European Commission alone is able to propose measures to be applied within the EU framework. Therefore, if something is regulated that can be transferred to third countries, impact within the geographical community framework is avoided, but it can continue to have negative repercussions on a global scale, thus simply moving the problem instead of solving it. If we are aware of this issue and continue with the initiative, we are dealing with pure hypocrisy or populist posturing. Industrialized countries are experts on this subject. We ban polluting industries and waste discharge in our own territories, but we do not limit imports of products created by these types of industries so long as they are produced by companies located in third countries. We don't avoid pollution; we simply move it.

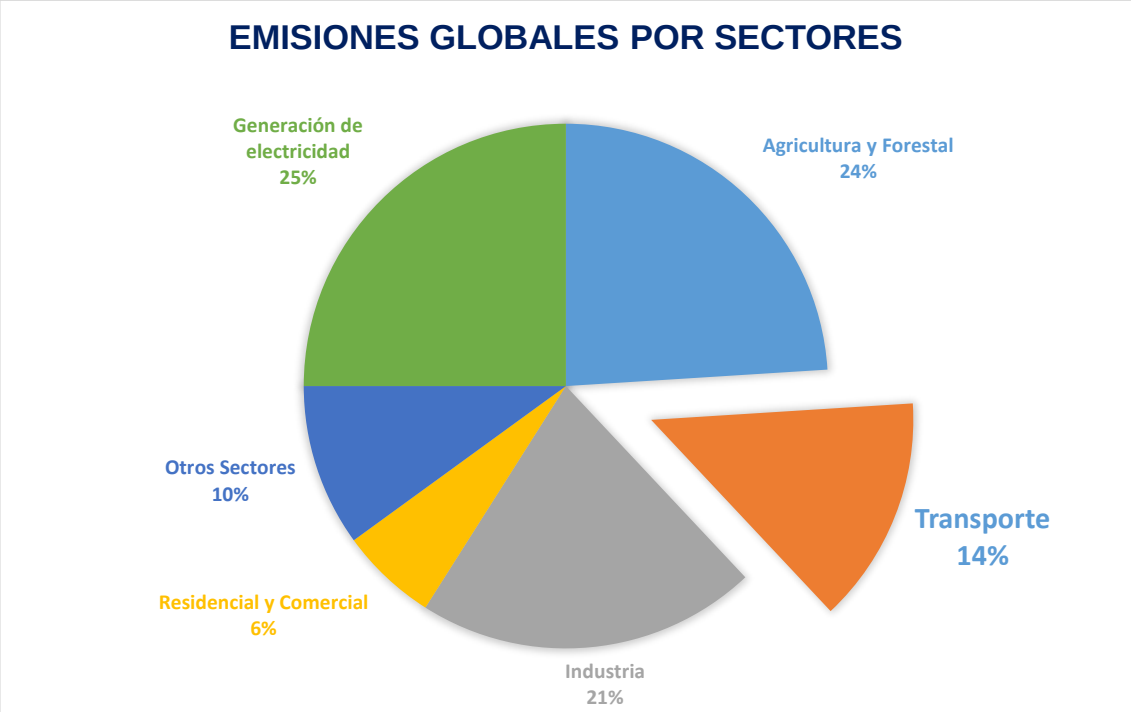
With these basic ideas in mind, let's analyse the Commission's proposal that from 2023 shipping companies must buy CO2 emission rights for 20% of the fuel used on each crossing. The transition period for the phased implementation is up to 2026. This affects 100% of emissions produced on all crossings between ports of the European Economic Area (EEA) and 50% of international crossings which enter or leave EEA ports. Therefore, in a somewhat simplified example, if a ship spends 500,000 euros on fuel for a crossing from Shanghai to Valencia, the shipping company must acquire CO2 emission rights whose value (based on current prices) could be equivalent to 20% of the specified consumption (100,000 Euros).

So far, so good. Europe has taken the lead globally in the fight against climate change and is backed by the majority of its citizens, thus legitimising its measures. The cost per container shipped is not excessive and can be borne without foreseeable major economic impact (inflation, loss of competitiveness, production relocation, etc.) The small penalty proposed could even be seen to encourage low

value-added goods to be produced in proximity to consumer markets (re-shoring or near-shoring).

The measure assumes the general extension of regulations approved for other sectors to include the shipping sector. So again, no objections. It must be noted that shipping as a whole is one of the biggest CO2 producers, so any measure which implies a reduction should be welcomed by all.

It is also worth remembering that awareness of the fight against climate change in the shipping sector stretches to all stakeholders in its logistics chain. All ports have very ambitious emission reduction programs to reach equilibrium by 2030 (Valencia, for example). Shipping companies (Balearia, Maersk, CMA, MSC, Grimaldi, etc.) as well as the road hauliers which operate in ports are fully aware of the problems and adopt measures to mitigate their impact.



Author's own. Comprehensive Prevention and ORP Data

Finally, while transport as a whole generates 14% of CO2 emissions worldwide, shipping represents 2.5% of net global emissions.

However, the overall importance of this as a significant polluting sector must be put in context with the total traffic moved by the shipping sector. 90% of all world freight uses ships as a method of transport. If we measure the emissions of every means of transport by the total volume handled and we reference, for example, the emissions per

tonne and per mile, we discover that **the shipping sector is by far the most efficient**. It would not make sense, therefore, to penalize the shipping sector only for it to lead to an increase in use of more polluting transport methods (aeroplane, lorry or train).

EMISIONES DE GEI DEL TRANSPORTE DE MERCANCÍAS. Año 2007

Unidades: gCO2 / ton - km	Emisiones
Carretera	136,3
Ferrocarril	28,8
Avión nacional	2.181,8
Barco nacional	18,6
Tubería	20,4

Fuente: "La eficiencia energética y ambiental de los modos de transporte en España"

With this long preamble in mind, let's move to analyse the proposed measures as currently drafted. The impact of the aforementioned is manifold, so we will group them into sections.

1. **The Impact on CO2 Emissions**

As the measure currently stands, **the impact on emissions reduction is null. The decarbonisation objective is not achieved**. If on the crossing between Shanghai and Valencia the boat calls at any of the non-member ports in the Mediterranean, the shipowner does not have to pay a penny for what has been spent and emitted during this part of the crossing, which is by far the longest. What are shipping companies going to do to avoid these costs? Easy: make a call at, for example Tangiers and then continue on to Valencia. A "**carbon leakage**" is created, and the ship will without a doubt call at any **pollution haven** it might encounter on its crossing.

CO2 emissions might even increase for two reasons. Firstly, because the additional stop on the crossing may increase the number of nautical miles sailed. Secondly because in order to benefit from these savings, the shipowner may concentrate cargo in these ports and use feeders (smaller boats) to carry cargo from the south of Spain or even Valencia to Tangiers for example. Given that size is key when it comes to evaluating environmental efficiency, such shifting of destinations and cargo could easily result in an increase of global CO2 emissions.

What's more, if so called "carbon leakage" occurs, then measures that European ports are adopting to reduce in-port emissions, such as

investing in facilities to supply electricity to ships (which community legislation itself will make obligatory in 2030) will not produce the predicted reduction of emissions as these measures will not be adopted in those other ports.

	Average CO_2 emissions by distance [kg CO_2 / n mile]	Average CO_2 emissions per tonne distance transported [g CO_2 / m tonnes· n miles]
Small Feeder	242.25	69.64
Regional Feeder	303.77	48.08
Feedermax	386.78	25.69
Subpanamax	467.62	20.75
Panamax	556.00	19.37
Postpanamax	769.62	13.91
VLCS	883.48	8.88
ULCS	988.71	6.80
General total	**584.50**	**26.82**

2. Direct Economic Impact

The **increase in costs** produced by the measure (20% of the final cost of fuel consumed on the crossing) will be directly transferred to the transported products and consequently to the consumer, even if, as previously mentioned, this will have a very limited impact. An approximate calculation based on the current price of CO2 rights (€80 per metric tonne) for a crossing from Asia could give a cost of €90 per container.

Without a doubt the measure is going to generate at the very least a **shift toward transhipment in pollution havens** with its resulting impact on Spanish and all EU ports in the Mediterranean (Greece, Malta, Cyprus, Italy).

This shift in transhipment will mean a **considerable reduction in activity**, especially in ports with a greater concentration of transhipment as well as the resulting **impact on income and employment** directly or indirectly generated by such activity.

Another important impact of the measure as a result of the shift in transhipment to other ports, is the **loss of connectivity between European ports.**

If connectivity is as vital UNCTAS studies indicate, the impact of this scenario could mean a **significant fall in the competitiveness of our exports**. Some important conclusions of this body:

- If other variables remain constant, a variation of 0.01 in a country's connectivity index could translate to a 3% fall in value of containerised cargo.
- If a direct shipping link with another country were to be lost, it would mean a reduction in the trade flow with that country by 5%.
- The disappearance of a direct shipping link could also increase the costs associated with trade with that country by 9.09%.

The result of all of these impacts will be the loss of production and jobs in the affected sectors, especially the lowest value-added jobs, where the increase in costs and loss of competitiveness have a greater impact.

We must consider the played by ports in the channelling of Spain's foreign trade sector (60% of exports and 85% of imports).

In conclusion, it should be pointed out that these measures may create a rupture in the current consolidated logistics chains, including but not limited to rail, road haulage and ports.

3. Are There Alternatives?

Many. Some are "**corrective**" and try to improve the text by avoiding or smoothing over the most impactful points (for example, extending the deadline so it is more in line with other initiatives of the Commission). Others of "**broader scope"** (modifications of the CO2 emissions protocol, or the inclusion of non-member neighbouring transhipment ports). Finally, others are much more "**modifying**".

For example. Let's suppose that the maritime shipping sector's emissions at present are on average 30 grams per transported metric tonne per mile:

One. We set an objective: we want to reduce these emissions by half (15g/MT/mile).

Two. We establish a deadline (2030).

Three. We establish a path of linear reduction (2022 30 g; 2023 29 g; 2024 27 g; 2025 25 g; and so on until 2030 15 g).

Four. All ships which, as a consequence of employing modern technology, or fleet upgrades find themselves below these targets will not be penalized.

Five. CO2 allowances should be bought in the proportion deemed appropriate for the type of vessel only by those above this trend line.

Six. The obligation to acquire emission rights will apply irrespective of stops in third ports outside the Community.

Seven. If the fleet is less than 20 years old (for example container ships, where 92% of the fleet is younger than this) and that all those launched in recent years are extremely efficient with average emissions well below required levels, over 8 years, we are encouraging new additions to meet out requirements so that by the 2030 the objective can be met.

4. Conclusions

One. **There is no quantifiable objective** for the reduction of emission within the established time period, there are only penalization measures.

Two. We are facing a measure which does not even fulfil the generic objective laid out by it, **decarbonization**. Due to this it is **ineffective**.

Three. it has an **elevated cost**.

Four. It has significant **secondary effects**

Five. There are much more efficient **alternatives** which do not create significant collateral effects.