A group of ship owners have announced plans for a $5bn (£3.8bn) fund to design zero-emissions vessels.

They says $2 (£1.50) should be levied on every tonne of ships' fuel - to support research into clean engines.

Shipping creates about 3% of the emissions that are over-heating the climate - equivalent to all of Germany's CO2.

Environmentalists welcomed the proposal but also described it as too little, too late.
They say it's outrageous that international shipping pays no fuel taxes, unlike lorry owners.

Green groups argue that if ships were taxed at the same level as lorries, 70 times more cash for developing clean engines would be raised in Europe alone.

Around 250m tonnes of fuel a year are burned by ships. The International Chamber of Shipping (ICS) says that 90% of owners globally are behind the $2 levy on fuel.

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- Speed limits for ships can have 'massive' benefits
- Five things we've learned from Madrid climate talks

'Urgent' problem

Guy Platten, secretary-general of the ICS told BBC News: "I have seen a massive change in the opinion of ships' owners over the past few years. "They've realised that we've got to do our bit by decarbonising shipping - and that means designing zero-carbon ships. That's why we need the levy. "At the moment we can't yet see what the best clean fuel would be for ships. But there's a real urgency about solving the problem."

He defended the size of the levy, saying it was small enough to be agreed by ship owners in the developing world, but big enough to make a difference.

However, Faig Abbasov from the green group Transport and Environment responded: "The proposed levy is a tiny amount. It's outrageous that the shipping industry has avoided taking responsibility for its emissions for
years - that's why it's facing difficulty now."

"Speed limits for ships can have 'massive' benefits"

Campaigners wanted to slow ships down, but the proposal was rejected

"What's needed is a huge programme to incentivise owners to buy zero-carbon vessels - as well as researching new technologies."

The ICS says its proposal is supported by the owners of 90% of the merchant fleet.

It defends its proposed 10-year research fund, which would need to be enforced through by the UN shipping body the International Maritime Organization.

The industry has reduced its emissions slightly over recent years, thanks mainly to ships slowing down after the 2008 financial crisis in order to
absorb the oversupply in shipping capacity.

Campaigners wanted mandatory slow steaming to save emissions, but the IMO rejected that proposal.

The IMO does have a target of halving emissions from international shipping by 2050 compared to 2008.

But the ICS says ships are so long-lived that zero-carbon vessels must be available as soon as possible.

**Fuel of the future?**

The optimum shipping fuel has not yet been decided.

One option is biofuels, but their availability will be globally limited by the need to ensure they're sustainable.

Shipping experts assume that the supply will be gobbled up by the wealthy aviation industry, anyway.

Other options are "green" hydrogen (produced by renewables); ammonia; fuel cells; batteries and synthetic fuels produced from renewables.

The ICS says none of these yet exists in a form or scale that can be applied to large transoceanic ships.

Even when the industry settles on a technology, massive investment will be needed to ensure the chosen fuel is available in ports round the world.

Mr Platten from the ICS says the path ahead is not year clear.

And then there remains the obstacle of the IMO, which is bound by the UN's need for consensus. Environmentalists say some nations' delegates
appeared intent on staving off action to protect the climate. The IMO said it would consider the levy plan.

**A Europe solution**

The EU meanwhile is under pressure to include shipping in the EU emissions trading scheme, in which polluting industries can buy and sell emissions permits. T&E says that would raise €24bn a year on current carbon prices.

Faig Abbasov complained: "The shipping industry is totally subsidised. It pays no tax on fuel, no VAT, no corporate tax. "The EU tax directive specifically bans any member state from taxing ships' fuel. If you travel to the south of France by coach, the firm pays fuel tax. If you go by luxury cruise you don't pay."

"It's time for a major change."

Ursula von der Leyen, president of the European Commission, made extending the EU emissions trading scheme to maritime transport one of the top political priorities of her tenure.

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