



GOUVERNEMENT

Liberté
Égalité
Fraternité

UNDERWATER NOISE

FROM MARITIME TRANSPORT

SOURCES



* There are many kinds of ships, each with its own acoustic signature. The sound intensity of a ship depends on several parameters such as its type and size, age, propulsion system, hull, and speed.



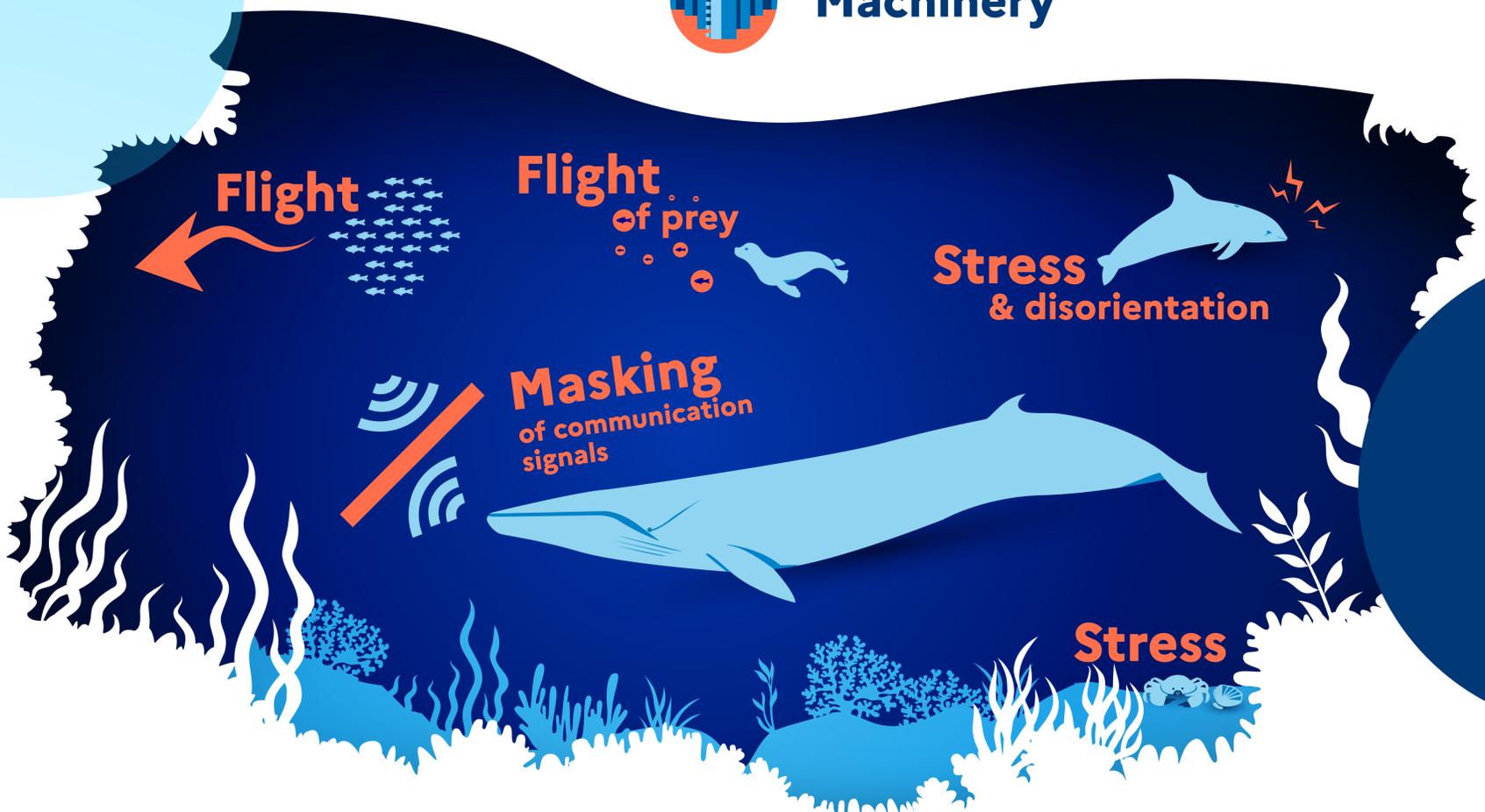
Propulsion



Machinery



Hull flow

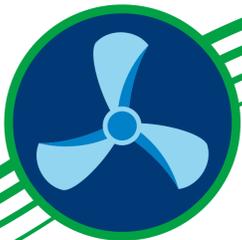


IMPACTS

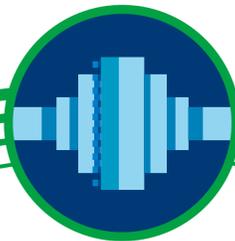
SOLUTIONS



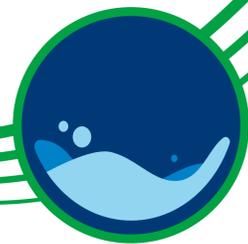
Reducing ship speed
Lowering the speed by a few knots



Reducing noise from propellers
Using innovative propellers to avoid cavitation



Reducing noise from ship machinery
Reducing the transmission of vibrations by insulating engines



Improving hull design & maintenance
Optimising the shape of hulls to limit flow turbulence

MOBILISATION OF STAKEHOLDERS



Canada is very active both domestically and at the international level in efforts to reduce the noise of maritime traffic. Canada spearheads the subject within the **International Maritime Organization (IMO)**.



The European Union tackled the subject of underwater noise in its **2008 Marine Strategy Framework Directive (MSFD)** and endorses, with the support of France, Canada's initiative at IMO.



The French State implements the **MSFD** by raising stakeholder awareness regarding underwater noise reduction objectives and measures for each maritime coastline.

A HOT TOPIC FOR THE FRENCH MARITIME SECTOR

- The **Blue Charter of Armateurs de France** requires its signatories to contribute to noise reduction.
- French shipowners carry out **acoustic signature measurements** on their ships and invest in **research and development** concerning the reduction of propeller noise and the isolation of machinery.



It already exists!

Port of Vancouver EcoAction Programme

Since 2017, this programme has provided **incentive measures** for cargo and cruise ships that are the most quiet; they are rewarded with **discounted harbour dues** on arrival at the Port of Vancouver.

