

Maritime Master Plan for a future-oriented maritime sector



**MARITIME
MASTER PLAN**
NET ZERO 2030

The maritime sector is extremely broad: from ports to offshore, from fishing to shipping and from maritime research institutes to maritime services. But the sector has one common denominator: ships. These are essential for transport, food production, coastal protection, and defense. In addition, they play a fundamental role in the generation of renewable energy at sea.

The Maritime Master Plan focuses on the **development, construction, and operation** of climate-neutral ships. By investing in this now, the Netherlands can bridge the gap between R&D and broad market upscaling, thereby strengthening and expanding its international competitive position in four strategic markets: coastal and inland shipping, hydraulic engineering, offshore wind, and maritime safety and security.

The Maritime Master Plan aims to develop, build and use 40 reliable and competitive climate-neutral demonstration ships for this purpose. In doing so, the plan **kickstarts the energy transition** of the maritime sector in the Netherlands, **boosts the Dutch economy** and **invests in the maritime autonomy** of the Netherlands and Europe.

Why do we need the Maritime Master Plan?



ENERGY TRANSITION

International shipping (national and international) is responsible for 3% of global greenhouse gas emissions, including CO₂. This makes shipping one of the fastest growing causes of CO₂ emissions, thereby contributing to climate change. Shipping causes emissions of 1076 million tons of CO₂ on an annual basis. If shipping was a country, it would be the fifth largest polluter in the world. To achieve the climate objectives and keep our planet habitable, emissions, including from shipping, must be drastically reduced.

In numbers:

The Maritime Master Plan contributes to the reduction of 230 billion tons of CO₂ until 2050 and thus a healthier environment for everyone.



AUTONOMY

The Netherlands needs a strong national maritime sector to protect its own public interests: a reliable (climate-neutral) energy supply, transport and (coastal) defense. This is especially important in times of rising geopolitical tensions. As a member of the European Union, the Netherlands must contribute to European strategic autonomy. Therefore, it is essential that the country has the knowledge and skills to develop, build and operate climate-neutral ships. This ensures independence from countries outside Europe.



ECONOMY

Internationally, the maritime energy transition is still in its infancy. Thanks to its leading maritime ecosystem The Netherlands is in an excellent starting position to become a leader in this transition. In doing so, we gain market share in four promising value chains:

- coastal and inland shipping;
- hydraulic engineering;
- offshore wind;
- maritime safety and security.

In numbers:

According to economic analyses, the Maritime Master Plan provides an additional added value of 33 to 40 billion euros by 2050. The number of ships built in the Netherlands will double in the same period from approximately 80 to about 160 ships per year.

How does the Maritime Master Plan achieve this?



FORTY DEMONSTRATION SHIPS

The plan focuses on the **development, construction, and operation** of forty demonstration ships that run on three alternative fuels: hydrogen, methanol, and LNG with carbon capture. These vessels will be used in coastal and inland shipping, hydraulic engineering, offshore wind, and maritime safety and security.



DIGITAL PLATFORM

The processes of **developing, constructing, and operating** the demonstration ships are supported by a digital platform on which data is shared and stored. This platform ensures effective cooperation in the value chain and allows partners to build on each other's progress. Gained knowledge is continuously updated on the platform. This creates a cyclical innovation process enabling efficiency gains.

In numbers:

The use of the digital platform saves up to 80% engineering hours and reduces development lead time by 50%. This will eventually reduce the cost of ships leading to a more competitive Dutch maritime manufacturing industry.



HUMAN CAPITAL PROGRAM

The Human Capital program aims to increase the labor productivity of the maritime workforce. The digital skills in the sector are strengthened by using the digital platform. Employees are trained and develop their knowledge of climate-neutral shipping. People are also optimally prepared for the labor market of the future through targeted research into new work and management processes as well as lifelong learning.

In numbers:

Without intervention, the expectation is that the number of students in maritime education will drop by approximately 13% over 10 years. This concerns both the design and manufacturing industry as well as the operational professions on board. If maritime education is not stimulated, it is expected that in 2030 there will be a labor shortage of approximately 6,000 people in the maritime labor market.

The investment in the Maritime Master Plan



To realize the total added value of 33 to 40 billion euros, the initial investment amounts to 1.1 billion euros. Of this, approximately 926 million euros will be financed by public and private partners. A contribution from the National Growth Fund is requested for the remaining 255 million euros. This contribution is necessary to address three bottlenecks:

1. Climate-neutral energy systems are more complex than the current systems and not yet reliable enough.
2. Ships are unique and often too large and expensive to first build a prototype to test innovations. Information is not shared efficiently enough, and the cooperation potential is insufficiently exploited.
3. The supply of alternative fuels is limited because of a lack of demand. Climate-neutral ships must first be built to create that demand.

Solving these three bottlenecks is expensive and involves risks. As a result, private enterprises cannot obtain sufficient financing. With a contribution from the National Growth Fund, the risks can be spread, and the costs shared. This will allow the maritime energy transition to proceed quickly.