The European Commission's Sustainable Transport Investment Plan: Summary and Analysis

In November 2025, the European Commission adopted the Sustainable Transport Investment Plan (STIP), setting out a roadmap to accelerate the energy transition in the aviation, maritime, and inland waterway transport sectors. Rodica LOISEL, Professor of Economics at LEMNA, and Nathalie MELCION FABRE, coordinator of the CARGO research network, provides a summary and analysis of this landmark plan.

STIP IN BRIEF

The Sustainable Transport Investment Plan (STIP) is the EU's financial strategy to unlock investments and boost the production of renewable and low-carbon fuels for the maritime and aviation sectors by 2030 and 2050. The EU expects a demand of **20 Mt of these alternative fuels by 2035** (along with an additional 3.1 Mt for inland navigation and the fishing sector), which will require significant investments, estimated **at €100 billion** by 2035

The STIP relies on a hybrid financing model which combines:

- **Public grants** (EU ETS Innovation Fund, Horizon Europe, European Innovation Council, the Connecting Europe Facility)
- **Private capital** via InvestEU (through the European Investment Bank - EIB), and the European Hydrogen Bank,

aiming to mobilise up to €2.9 billion by 2027.

The STIP acts as **a bridge between policy ambition and industrial execution** by de-risking maritime investments, diversifying EU-sourced sustainable fuels, and integrating ports into a unified low-carbon transport system. Scheduled for adoption in Q2 2026, the EU Ports Strategy will transform ports into central energy hubs, enabling their key role in the production, storage, and distribution of Sustainable Maritime Fuels (SMF).

Focus on maritime fuels needs

To meet the FuelEU Maritime target of a 14.5% greenhouse gas intensity reduction by 2035 (80% in 2050), the shipping sector will need to undergo a massive transition to Sustainable Maritime Fuels (SMF), requiring an estimated **11.3 Mtoe by 2035**. (For comparison, the current fuel consumption of the sector in Europe is around 40–45 Mtoe, according to Eurostat).

While the maritime sector currently faces binding emission targets rather than binding fuel supply targets, the Renewable Energy Directive (RED) already obliges Member States to include maritime fuel suppliers in mechanisms promoting renewable energy use in transport. The upcoming **Energy Union package** (2026) is expected to introduce new incentives and measures to secure SMF availability in EU ports, ensuring that fuel supply keeps pace with regulatory targets.

Coastal vessels in small and medium ports are likely to adopt electric or hybrid propulsion supported by bio- and future e-diesel, while ocean-going ships move toward LNG, bio-/e-methane, and e-methanol or ammonia. Given the diversity and Small and Medium-Sized Enterprises-driven nature of the shipping sector, **a broad range of fuel solutions** will be required, also extending to inland waterways, short-sea shipping, fishing vessels, and recreational craft.

Investments

By 2035, total investment needs to develop sustainable aviation fuels (SAF) and sustainable maritime fuels (SMF) are estimated at **€100 billion**, split between:

- Aviation: €56.9-66.7 billion
- **Maritime: €34.7-46.7 billion.**

Key public funding instruments 2026-2027 for both SAF and SMF include:

- the **Innovation Fund** financed by EU ETS revenues: €446M for e-SAF and maritime fuels projects and an additionnel €300M distributed in Q4 2025 via the European Hydrogen Bank through auctions[1];
- **InvestEU:** €2 billion for scaling up sustainable alternative fuel production for 2026-2027;
- the **EIB - European Investment Bank Group**: additional investment could be mobilized including through the TechEU program for clean technologies (potentially reaching up to €250 billion across all competitiveness sectors);
- **Horizon Europe**: around €133.5M over the 2026-2027 period to support R&I projects of renewable fuel technologies and industrial value through Horizon Europe calls and through two SET Plan flagships (Strategic Energy Technology Plan);
- the **EIC - European Innovation Council:** possibility to fund sustainable fuel projects, which are eligible under the EIC Scale-Up call of €300M;
- and **EU-ETS** support for EU-produced SMF.

Market mechanisms and risk mitigation

By focusing on de-risking Sustainable Maritime Fuels, the plan aims by 2027 to **bridge the price gap with fossil fuels**, considering high production costs of renewable hydrogen and other SMF and their limited technological maturity.

To provide investment certainty and accelerate scale-up, mechanisms have been introduced by some Member States: contracts for difference (CfDs), carbon contracts for difference (CCfDs), "revenue stabilisation mechanisms", double-sided auctions… Drawing on these instruments, the EU will also work towards establishing an intermediary mechanism for **double-sided auctions at EU level** for SAF and SMF production (double-sided auctions link long-term producer contracts with flexible buyer agreements through market intermediarie).

In parallel, the EU is planning to extend the use of **Power Purchase Agreements (PPAs)** to renewable fuel production, and exploring complementary tools such as **tradable fuel certificates** or **book-and-claim options**. Together, these mechanisms are intented to establish

[1] The European Hydrogen Bank operates through competitive reverse auctions, whereby renewable hydrogen producers bid for a fixed premium per kilogram produced. Contracts are awarded to those requiring the lowest public subsidy to bridge the cost gap with fossil fuels.

a **de-risked, bankable market framework** capable of unlocking large-scale investment in Europe's renewable fuels sector.

Building on lessons from the first reporting periods, the Commission will also assess the ability to **simplify the monitoring and verification of maritime fuels use,** by developing a single Monitoring, Reporting and Verification framework (MRV) for maritime decarbonisation, serving both ETS Maritime and FuelEU, with an important potential to reduce administrative burdens for shipping companies, verifiers, and Member States.

International cooperation

The EU is further strengthening international cooperation through the establishment of **Global Gateway Green Shipping Corridors** linking European ports with strategic hubs in Latin America, Sub-Saharan Africa, and Asia, while promoting joint fuel certification and bunkering standards.

CARGO INSIGHTS

The investments required to decarbonize the maritime sector are huge (€39 billion per year, according to the 2024 Draghi report). Securing adequate funding is therefore critical and **requires contributions from all EU Member States**, as even far-hinterland regions consume imported goods and will be directly or indirectly affected by the cost of the energy transition in waterborne trade.

Mobilizing large-scale funding, as envisaged under InvestEU and the STIP (via the EIB, national promotional banks, multilateral and regional development banks), is essential, especially since some EU countries have high household saving rates (close to 20%, Eurostat) and might further support private investment.

Investment de-risking could **reduce** in this way **the risk of passing transition costs to consumers and mitigate inflation**: the experience shows that freight rate increases do not linearly follow fuel consumption or carbon emissions (due for instance to oligopolistic market pressures, Link). Looking ahead, increased maritime trade demand (of 2–3% per year through 2050, IMO; UNCTAD), and higher energy costs due to fuel scarcity and carbon regulation, will further pressure freight rates. Inflationary impacts are expected to affect mainly agricultural products and industrial raw materials, with serious consequences for food security, energy supply chains, and the global economy (UNCTAD).

In this context, the STIP financial roadmap could **ensure European industry resilience and protect vulnerable households**, while **pioneering funding mechanism designs** amid uncertainties about the IMO's fundraising capacity and ongoing debates over the legitimacy of the IMO implementing market-based instruments such as an international carbon tax.

Academia stakeholders within CARGO therefore welcome the STIP financial strategy and look forward to contribute with data and evidence for clean shipping technologies, smart business models, green financing designs, and European and international regulatory frameworks while anticipating the training and skills needed to make decarbonization effective in the short to mid term.

CARGO research work directly related to the STIP

CARGO researchers are currently working on three critical systemic challenges identified within the STIP:

- **The transposition lag**

A primary obstacle is the "timing mismatch": while EU directives are transposed quickly, the permitting process for large-scale infrastructure projects in many Member States still spans seven to ten years : an unsustainable duration with the 2030 targets only five years away.

- **The inflationary impact** (see above)
- **Social equity concerns**

The plan's limited focus on social equity raises significant risks: escalating fossil-fuel costs before viable alternatives are accessible could exacerbate mobility poverty, particularly in peripheral or less-developed regions. This may occur despite the introduction of new market and financial de-risking mechanisms that might be too sophisticated to attract SME and other institutional investors in green transport. For instance, the European Hydrogen Bank's fixed-premium auctions illustrates such complexity.