



Co-funded by  
the European Union

Press release

7 June 2024



**S A F A R I**

Safe, Climate Resilient Ports

## SAFARI project to enhance port resilience against extreme weather events

The month of May marked the official launch of the SAFARI project, an initiative funded by the European Union under the Horizon Europe programme. The SAFARI project, coordinated by the University of Lille (France) and comprising 24 partners from across Europe, is set to advance port infrastructure resilience, addressing the increasing threats posed by extreme weather events.

European ports are vital hubs for international trade, economic growth, and regional connectivity. However, these critical infrastructures face numerous risks from extreme weather events such as storms, strong winds, heavy rainfall, coastal flooding, and heatwaves. These events can severely disrupt port operations, damage infrastructure, and pose safety risks to vessels and personnel.

In recent years, Europe has experienced a rise in extreme weather events, leading to substantial economic losses. The severe floods in July 2021 affected multiple European countries, causing estimated damages of up to €10 billion, with insured losses reaching €2.55 billion. Additionally, prolonged heatwaves and droughts have significantly impacted various sectors, with annual losses estimated at around €9 billion for the EU.

The SAFARI project aims to address these challenges by developing a digital platform for resilient port infrastructure. This platform will connect large port communities by establishing strong communication channels between port stakeholders and infrastructures, and be equipped with emergency management modules, supported by operational, maintenance, and analytical components.

### Key objectives of the SAFARI project:

- **Maintain port operations:** Ensure that port operations continue at 80% capacity during disruption periods.
- **Optimise transport assets:** Efficiently allocate multi-modal transport assets to achieve a 20% modal cargo shift, reducing environmental impact and minimizing downtime.
- **Enhance infrastructure resilience:** Develop measures to strengthen existing port infrastructure against extreme weather events.
- **Ensure safety:** Safeguard personnel, vessels, and biodiversity during extreme weather events.
- **Develop governance models:** Create guidelines and governance models to address climate risks and hazards for port infrastructure.

The SAFARI consortium will implement new measures across various maritime and inland infrastructures. Pilot projects will be conducted in key ports, including Dunkirk (FR), Seville (ES), and Lisbon (PT), with additional replication efforts in Livorno (IT) and Tripoli (LB).



- **Dunkirk (FR):** Focus on maintaining port capacity and connected hinterland infrastructure during disruption periods.
- **Seville (ES):** Ensure continuous navigability between maritime ports and connected inland waterways.
- **Lisbon (PT):** Enhance multi-modal transport resilience at the seaport and connected inland waterways.
- **Livorno (IT):** Apply port infrastructure monitoring and port safety
- **Tripoli (LB):** Implement measures for water quality and biodiversity conservation during extreme weather events.

Additionally, SAFARI will implement structural measures such as preventive maintenance using digital twins, advanced monitoring technologies like drones, impact assessment simulations, and robot-assisted repairs. For safety, the project will develop solutions such as connected helmets and training programmes for port personnel.

By integrating operational, structural, institutional, and socio-economic measures, the SAFARI project aims to create a comprehensive and replicable resilience plan for EU ports.

For more information about the SAFARI project, please contact:

**Rochdi Merzouki, Project Coordinator**

University of Lille  
rochdi.merzouki (at) polytech-lille.fr

**About SAFARI**

**SAFARI – Safe, ClimAte Resilient Infrastructure**– officially started on 1 May 2024. This € 6.2 million project funded by the European Commission under the Horizon Europe programme will last 3.5 years. It gathers 24 organisations from France, Spain, Greece, Finland, Norway, Belgium, Portugal, Lebanon and Italy representing port authorities, port operators, infrastructure maintenance, software suppliers, research and academia.

*Co-funded by the European Union under Grant Agreement number 101147432. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.*