Economic Security in Technologies and Resources (ESTER)

Context

The EU is committed to advancing economic security and bolstering the resilience of its supply chains. Disruptive geopolitical events have demonstrated the need for the EU to further strengthen its open strategic autonomy and remain competitive in a global market, while ensuring that no one is left behind. The EU needs resilient, diversified supply chains to reinforce economic security, particularly in critical raw materials, technological components, and equipment.

The conclusions of the European Council meeting on 26-27 October 2023 underscore the pressing need to accelerate initiatives aimed at enhancing the EU's competitive edge in digital and clean technologies. There is a clear need to ensure a secure and affordable supply of clean energy, to reduce critical dependencies, in particular of medicines and critical raw materials, and to diversify supply chains through strategic partnerships.

The European Economic Security Strategy aims to minimize risks to the resilience of supply chains and technology security and to prevent technology leakage in the context of increased geopolitical tensions and accelerated technological shifts. The strategy establishes a list of technologies with potential dual-use applications, which are critical to economic security. The risks associated with the security and leakage of these technologies need to be assessed with a view to devising appropriate mitigating measures.

The European Commission's Transition Pathways for the chemical industry proposes actions for a transition to safe and sustainable chemicals, including reducing strategic dependencies on gas and crude oil, which are the main feedstocks of the chemical industry.

Furthermore, the European Defence Industrial Strategy calls to strengthen the technological and industrial defence base.

Member States require further support to implement the Green Deal Industrial Plan (GDIP), the Critical Raw Materials Act (CRMA), the Net-Zero Industry Act (NZIA), as well as the Internal Market Emergency and Resilience Act (IMERA).

Objectives

The objective of the flagship is to support Member States to make supply chains of critical resources more resilient and to improve security of critical technologies. This flagship builds on the TSI 2024 Green Deal Industrial Plan Flagship.

Indicative support measures

The below is an indicative, non-exhaustive list of support measures:

Implementation of NZIA, CRMA, and IMERA:

- Analyse the potential for local production, processing, and enhanced recycling of critical resources, such as critical raw materials and equipment currently imported from third countries;

- Map financing opportunities for net-zero technology projects and matching them with needs;

- Enhance their administrative capacity to strengthen preparedness and resilience of the Single Market in an event of crisis or disruptions;

- Introduce simplified and accelerated permitting procedures for investments in critical raw materials projects and net-zero technology manufacturing projects;

- Promote streamlined public procurement of critical raw materials and technologies, including joint acquisitions of complex systems by Member States;

- Introduce and apply sustainability and resilience criteria for net-zero technologies in public procurement, auctions, or support schemes.

Management of risks to the resilience of supply chains:

- Identify potential bottlenecks for critical supply chains;

- Conduct stress tests / SWOT tests on critical supply chains;

- Address strategic shortages and dependencies / risks in critical resources, including medicines, raw materials, and key enabling critical technologies, producing critical medicines;

- Develop stockpiling strategies and instruments for critical resources, technologies, and medicines;

- Develop early warning systems and rapid response mechanisms to potential shortages and/or external shocks to critical supply chains and critical production capacities;

- Promote co-operation, dialogue, and exchange of good practices on the above-mentioned challenges and measures between Member States, economic operators, higher education, and R&D sectors.

Management of risks to technology security and technology leakage:

- Conduct stress tests and SWOT analysis on critical technologies;

- Develop tools to identify risks of technology and know-how leakage associated with investments and trade;

- Address risks associated with exports or outward investments of key enabling technologies (e.g. military applications, including quantum, advanced semiconductors, and AI);

- Exploit the potential of technology transfer from research and other commercial production sectors for emergency/contingency production/upscaling;

- Promote co-operation, dialogue, and exchange of good practices on the above-mentioned challenges and measures between Member States, economic operators, higher education, and R&D sectors.