

The hidden **impact** of the pills we take

Have you ever thought about the environmental impact behind the pills you take? The pharmaceutical industry faces a growing problem of environmental pollution throughout the entire life cycle of its products.

Pharmaceutical companies can emit as much greenhouse gas—or even more—as industries like the automotive sector. Adopting sustainable synthesis methods for APIs can reduce these environmental impacts by minimizing hazardous waste, lowering energy consumption, and using sustainable raw materials, helping to create a more eco-friendly pharmaceutical industry.

In numbers

100,000 tonnes of pharmaceuticals are consumed globally each year, 24% in Europe.

The total global emissions of the pharma sector amounts to about **50 megatonnes of CO₂e** in 2015.

The manufacture of **1 kilogram of active pharmaceutical ingredients** (APIs) is linked with **200 kilograms of waste**.



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Decarbonising Europe's pharmaceutical industry

Horizon Europe Green
Pharmaceutical Projects



Horizon Europe Green Pharmaceutical Projects

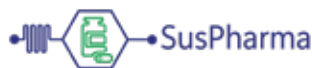
To address the decarbonisation of active API production and to promote the development of pharmaceuticals in a manner that is fundamentally less harmful to the environment, the European Commission has funded five projects through the Horizon Europe programme. This initiative has two primary objectives:

- To encourage the development of pharmaceuticals that are inherently less damaging to the environment.
- To drive innovation in green API manufacturing.

In addition to these goals, the programme places a strong emphasis on ensuring and strengthening the supply chain for medicinal products. This includes measures to prevent shortages and enhance preparedness for potential crises, helping to secure reliable access to essential medicines across Europe.

Through these efforts, these Horizon Europe projects aim to create a more sustainable and resilient pharmaceutical industry, better equipped to meet both current and future challenges.

5 EU-funded projects working together



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SusPharma

SusPharma aims to develop sustainable, green methodologies for pharmaceutical synthesis by integrating flow chemistry, digital tools, and waste valorization. The project emphasizes eco-friendly processes to reduce waste and environmental impact.

TransPharm

TransPharm aims at a greener pharmaceutical industry by exploiting literature data for sustainable drug synthesis, identifying eco-friendly API syntheses, reducing waste, and sharing insights to support Europe's self-reliant, sustainable healthcare future.



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ETERNAL

ETERNAL's overall purpose is to contribute to sustainable development of pharmaceutical manufacture, use and disposal, by using and promoting full life cycle approaches covering design, manufacture, use, and disposal.

ENVIROMED

ENVIROMED project narrows the knowledge gap of the effect of pharmaceutical compounds, and their derivatives in the environment. It enables a better understanding of their environmental impact throughout their lifecycle. Moreover, the project aims to develop a set of technologies that enable greener and more efficient pharmaceuticals production.



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IMPACTIVE

IMPACTIVE uses mechanochemistry to manufacture greener pharmaceuticals. Mechanochemistry gets rid of solvents. Instead, it uses mechanical force, like grinding and milling, to drive chemical reactions. It's successfully used by other industrial sectors and now, IMPACTIVE will validate its use in pharma.