

Life in motion: on the path to green mobility



Many people depend on a well-functioning and efficient mobility system. Yet, transport causes high levels of greenhouse gas (GHG) emissions, resulting in negative impacts like climate change, air pollution and noise. The European Commission has launched its 'Sustainable and Smart Mobility Strategy' and other actions to reduce these emissions. Several LIFE projects support these actions.

The transport and mobility sector



- ▶ contributes **5%** to Europe's Gross Domestic Product (GDP)



- ▶ directly employs around **10 million people**



- ▶ is the **second-largest** area of European household expenditure



- ▶ generates **one-quarter** of the EU's GHG emissions



- ▶ causes air, noise and water **pollution**, and biodiversity loss



- ▶ uses **natural resources** and **derivatives** like rocks, metals and plastics to build and maintain infrastructure and vehicles



- ▶ is responsible for **road accidents** and **congestion**

How LIFE is driving green mobility

Over the last decade, the LIFE Programme has co-financed 75 projects worth €350 million focusing on four aspects of sustainable mobility:



1. Transport planning and design

- Promoting multimodal connectivity
- Using technology and incentives to change behaviour
- Boosting biodiversity and human wellbeing



2. Fuels

- Renewable and low-carbon fuels
- Promoting these new fuels in public and freight transport
- Overcoming administrative and legal issues for their uptake



3. Greening conventional transport

- Promoting clean and energy-efficient urban mobility
- Minimising noise and promoting health
- Integrating EU policies to transition to green mobility



4. Innovative materials and technologies

- Greener materials and components for transport
- Reducing emissions from the construction of mobility infrastructure
- Enhancing circularity in mobility

Sample of *Life* green mobility projects

Renewable and low-carbon fuels: LIFE 'N GRAB HY!



Photo: LIFE14 ENV/BE/000415



Photo: LIFE14 ENV/BE/000415

Heavy-duty vehicles like waste collection lorries are responsible for around 5% of the EU's total GHGs.

Belgium's **LIFE 'N GRAB HY!** project team showed that hydrogen is a green alternative to power these heavy-duty vehicles.

Results

- The team built two fully homologated 26-tonne [hydrogen-fuelled waste collection lorries](#)
- These lorries were deployed in the Eindhoven greater region and Cologne's Hürth area
- The vehicles were a resounding success, significantly reducing noise, air pollution, and emissions
- Demand for the project's lorry manufacturer has grown substantially because of the project – it now produces 50 such vehicles per year

Innovative materials and technologies: LIFE+ COBRA

Around 21% of vehicles' particulate matter (PM) comes from their brakes. Also, the use of phenolic resins in manufacturing brake pads uses a lot of energy, and water, causing GHG emissions.

The **LIFE+ COBRA** project developed a next-generation and green braking system.

Results

- The team developed the new system based on cement instead of phenolic resins
- Substituting organic materials with cement reduced energy consumption by 80%
- The Global Warming Potential (GWP) of the product was reduced by about 60%
- Water consumption was down by 42%
- The brake pads improved environmental performance as no harmful chemicals were used during the braking process

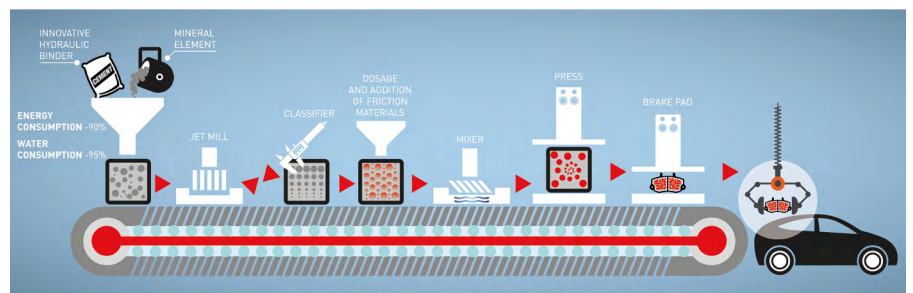


Illustration: LIFE13 ENV/IT/000492



Photo: LIFE13 ENV/IT/000492

Transport planning and design: U-MOB LIFE



University campuses act as the start and end transit points for many journeys. Introducing sustainable urban mobility practices on campuses across the EU can reduce CO₂ emissions and help mitigate climate change.

The team behind **U-MOB LIFE** created a university network to exchange knowledge about sustainable mobility best practices among European universities.

Results

- U-MOB LIFE today has [85 universities](#) participating in its network
- The team raised awareness of the potential positive impact of sustainable mobility management on university campuses in terms of CO₂ emissions reduction
- They helped university campuses create sustainable mobility action plans
- This network is a tool for fewer CO₂ emissions thanks to the improved mobility of the university community

- 16 universities took part in the project's sustainable mobility contest
- City councils, regional and national authorities, transport agencies, and civil society groups joined the network



Photo: LIFE15 GIC/ES/00056/NEEMO EEGIGEd Thorpe

Greening conventional transport: LIFE BrennerLEC

Traffic on the regional section of the A22 highway in Italy is responsible for 41% of Nitrogen Oxide (NO_x) emissions, which are damaging to the environment and human health.

The **LIFE BrennerLEC** project experimented with dynamic speed management on a 91km stretch of the motorway to examine the impact on traffic fluidity and air quality.

Results

- The team combined dynamic speed limit reduction and dynamic lane activation strategies during periods of heavy traffic
- They also managed the maximum allowed speed limits according to air quality
- They managed traffic flow near the biggest urban areas via intelligent road signs
- There was a 10% reduction of NO₂ concentrations via an average speed reduction of 14 km/h



Photo: LIFE15 ENV/IT/000281

- Traffic jams were down on average by two hours a day
- 10% reduction in overall travel times
- Overall, the measures improve air quality, protect the climate and reduce noise

EU policy on green mobility

The **European Green Deal** includes a target to reduce transport-related GHG emissions by 90% by 2050. To meet this goal, the Commission adopted the **Sustainable and Smart Mobility Strategy** in 2020. This Strategy presents Europe's vision for the transport system of the future – sustainable, smart, and resilient. It comes with an action plan listing 82 initiatives in

10 key areas for action, each with concrete measures.

In December 2021, the EU launched the **New Urban Mobility Framework**, comprising measures to develop urban transport systems that are safe, accessible, inclusive, affordable, smart, resilient and emission-free.

Also in 2021, the European Commission adopted a package of proposals to make the EU's climate, energy, land use, transport and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels. The so-called **Fit for 55 package** has potential implications for road, rail and aviation.

Milestones for a smart and sustainable future



Learn more

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How to apply for LIFE funding

The European Commission organises annual calls for proposals. Full details are available at ec.europa.eu/life

Contact

European Climate, Infrastructure and Environment Executive Agency (CINEA)
 European Commission - W910 - B-1049 Brussels, Belgium
 CINEA-COMMUNICATION-LIFE@ec.europa.eu

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