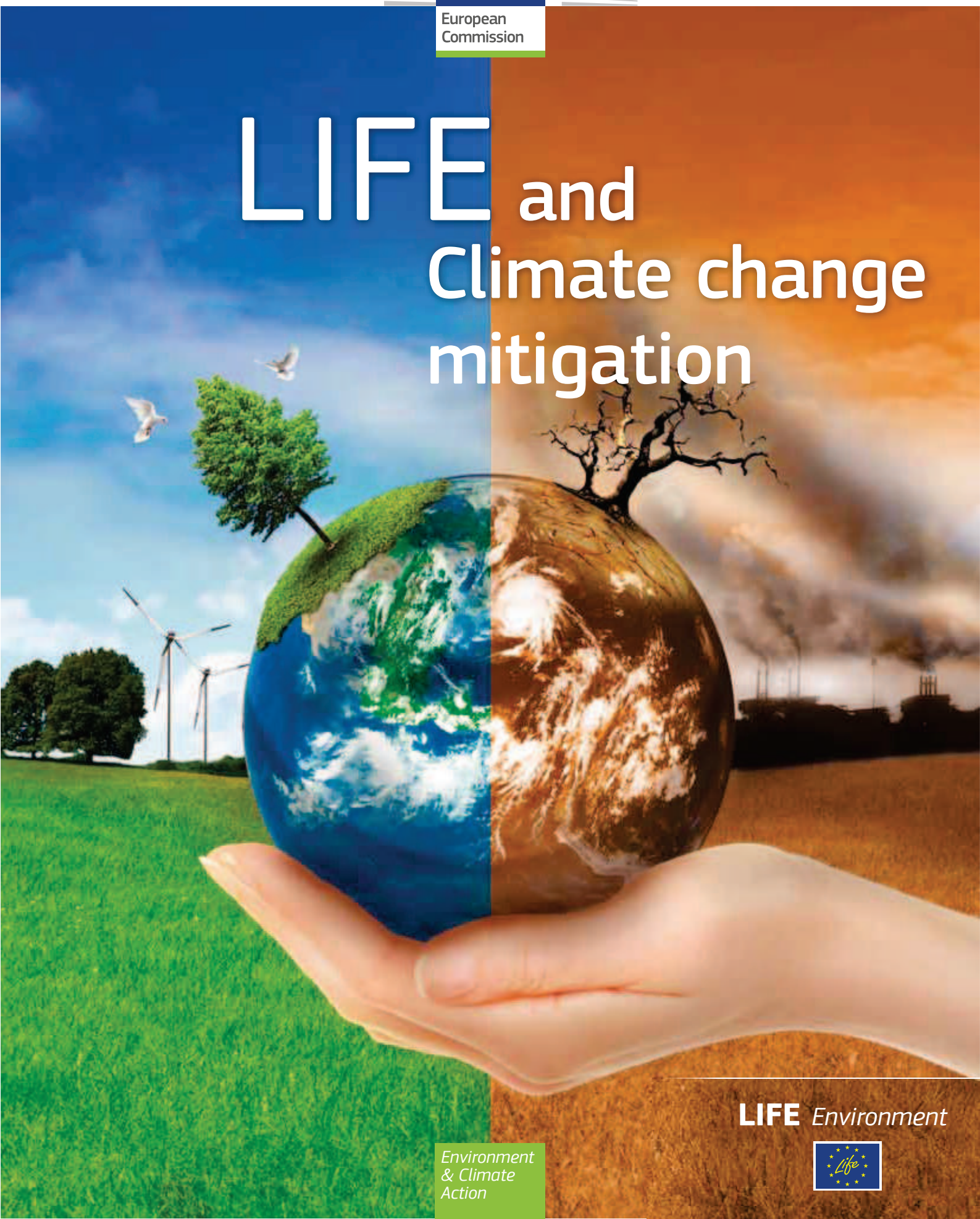
European Commission

LIFE and Climate change mitigation



LIFE Environment

Environment & Climate Action

EUROPEAN COMMISSION
ENVIRONMENT DIRECTORATE-GENERAL

LIFE ("*The Financial Instrument for the Environment*") is a programme launched by the European Commission and coordinated by the Environment Directorate-General (LIFE Units - E.3. and E.4.).

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Training, knowledge exchange and advisory services play vital roles in implementing such actions. These should be further promoted by (and between) Member States in ways that help reduce GHG emissions. Awareness needs to be raised amongst food producers and land managers about how they can help themselves and others to reduce emissions and increase carbon storage.

Farmers should also be made more aware of the economic advantages that such mitigation opportunities offer for them – particularly from savings in costs, management, and/or maintenance inputs, as this is another incentive for change towards climate-friendly agricultural practices.

LIFE's role

LIFE co-financing has been used by Member States to test and demonstrate a valuable collection of new climate-action methods and mitigation techniques in the aforementioned areas. Many useful lessons have been learnt across rural Europe and successful project outcomes continue to be incorporated into today's climate-friendly farm practices.

LIFE projects dating back to the 1990s have produced helpful reductions in GHG emissions even if, in most cases, this has been an indirect consequence of actions aimed at implementing the Water Framework Directive or other environmental policies.

The AGRICARBON project showed how precision and conservation agriculture techniques can contribute to GHG emission reductions

Photo: LIFE08/ENV/E/000129

Increasing nitrogen efficiency

LIFE has funded over 20 projects targeting nitrogen efficiency in agriculture that have produced multi-purpose environmental outcomes. In the Petrigano project for example, a programme of work was launched in 2000 demonstrating agronomic techniques where nitrogenous fertilisers were adapted to specific cultivation objectives, soil types and type of crop. A farm-by-farm and crop-by-crop calculation achieved a reduction of 50%, without reducing the yield. Such findings remain relevant for Europe's air, water, biodiversity, and climate simultaneously The use of zeolites that significantly reduce the release of unused nitrates from fertilisers are being shown by two LIFE projects (ZeoLIFE, UNIZEO).

Other examples of multifunctional outcomes from earlier LIFE projects include AGRI-PERON's satellite techniques for helping farmers to adopt tailored practices, and thereby reduce their nitrogen inputs. LIFE has highlighted the value of applying real-time monitoring data to establish a farm's ideal nitrogen requirements (OptiMaN). This approach has attracted the interest of policy-makers, since LIFE project results showed that nitrate usage levels on EU farms may be overestimated (and thereby reduced) by as much as 30%.

When climate issues became a strategic priority for LIFE in 2007, agricultural projects started to be aimed more directly at climate matters. Nitrogen management continued to be pivotal for much of LIFE's agricultural portfolio, as it moved from profiling general good practices to more targeted methods for minimising N_2O emissions from specific types of farms, crops, and soils.

This can be seen in modern-day projects such as IPNOA, which is demonstrating new opportunities for measuring N_2O fluxes in farm soils. The IPNOA team is testing a portable tool to identify emission levels from different soils at farm level, and a complementary technology is increasing knowledge about emission variability across wider-scale agri-ecosystems. Project results due in 2016 are predicted to help reduce emissions by as much as 20% from their baseline position.

Improving agriculture's ability to quantify emission levels, carbon storage, and mitigation impacts is highly important for agri-climate projects, programmes, and policies. One of LIFE's most promising sets of results in this area has been achieved