



Final practice abstract WP2: Technology roadmaps to decarbonise the European food chain

The ENOUGH project has developed tailored technological roadmaps to decarbonise the various stages of the food supply chain (processing, storage, transport, retail, food service (catering) and domestic food storage) across six locations in Europe (Paris (France), London (UK), Kaunas (Lithuania), Warsaw (Poland), Oslo (Norway) and Rome (Italy)). Practical and market-ready solutions were prioritised. Technologies/operational opportunities to save carbon emissions were reviewed to identify the most suitable options. Typical facilities were modelled to assess the decarbonisation potential of the technologies/operational changes when applied in the different countries. Each roadmap explains different scenarios, possible GHG savings and some main recommendations for the sector.

Results show that there are many options available for carbon reduction. Examples are electrification (move from fossil fuels), purchasing efficient equipment, minimising heat gains (e.g. infiltration, better insulation, operational efficiency, alternative practices/technologies), use of renewable energy, moving to natural refrigerants, use of heat pumps (low, plus high temperature), heat reclaim/exchange, auditing and maintenance (+skills).

Achieving climate neutrality by 2050 is feasible if the best technologies are applied, but this is reliant on decarbonisation of grid electricity and reduction of high GWP refrigerants. The timeline will differ between countries, depending on how quickly they decarbonise their energy systems and adopt sustainable technologies. Location has an impact on selection of equipment and overall benefits. Options are available to retrofit or for new systems, and early application of technologies/strategies reduces overall carbon emitted.



¹FAOSTAT Analytical Brief 50: GHG emissions from agrifood systems: Global, regional and country trends.

