

Luxembourg in Transition: A Roadmap to 2050

With one of the largest ecological footprints in the world, Luxembourg and its surrounding regions have both an obligation and an opportunity to set a precedent through structural transition that leverages the commitment and ingenuity of its people to improve equity and quality of life for all Luxembourgers. Technology alone is not the solution. The calculations of all Luxembourg in Transition teams demonstrate that only an integrated response from government, communities, industry, and individuals can catalyze the 90% reduction of greenhouse gases necessary to achieve the net-zero carbon goal. Interventions for decarbonisation and resilience in Luxembourg by 2050 will affect all aspects of society, but this transition map illustrates how these changes can set the course for a transition that aspires beyond economic growth and environmental resilience to achieve spatial, social, and environmental justice.

Over the course of the last century, Luxembourg has transformed its agrarian economy to an industrial powerhouse, and finally to a service nation. It has an inherent capacity to implement profound change in only a few decades. Harnessing this strength is the departure point for the net zero transition journey. Given the current state of affairs, there is but one choice: act. Act *now*. A zero-carbon Luxembourg in 2050 begins today. The following seven principles create a framework for the journey to 2050.

1. Take no more land

- + Build only on land that is already sealed and densify.
- + Build less, transform more, prioritize renovation and adaptive re-use.
- + Expand the public transportation system and optimize existing roads and soft mobility networks.

2. Work with water resources

- + Make water a central topic of spatial planning and design.
- + Make river water potable.
- + Integrate flood management for territorial spatial planning.

3. Mix functions on all levels

- + Transform mono-functional activity zones to multi-functional spaces.
- + Encourage citizens to work where they live, and live where they work, enhancing the affordable housing stock in mixed-use areas.
- + Mix modes of transport and reduce the volume of mobility through an urbanism of proximity.
- + Multiply rural land use to combine agriculture, forestry, recreation, biodiversity, and water management.
- + Cultivate productive green areas within cities.

4. Adapt agricultural practices and change diet

- + Promote zero carbon farming: a productive agriculture considering sequestration.
- + Develop agroforestry, silviculture, and its value-chains.
- + Develop new crops, research and develop meat alternatives to foster dietary change.
- + Reduce meat and dairy production.

5. Develop a land and housing policy for the common good

- + Consider the bio-functional region as territory of shared resources.
- + Support affordable housing solutions for all members of society, as well as community-based, decentralized housing distribution management.
- + Implement measures that prevent speculation of land for private profits.

6. Challenge the mobility hierarchy

- + Make public transport more convenient than individual vehicular transport, and train travel more convenient than air travel.
- + Transform the car-centric city into the pedestrian- and bike-friendly city.
- + Support investments in clean and soft mobility options.

7. Boost alternative ecological economies and initiatives

- + Champion sustainable practices, renewable energy and storage infrastructure.
- + Scale-up civil initiatives in the sectors of energy production, repair and food, housing and living environment.
- + Federate alliances of existing civic best practices through a 'Chamber of Commons'.