

LUXEMBOURG IN
TRANSITION

SPATIAL VISIONS FOR THE ZERO-CARBON
AND RESILIENT FUTURE
OF THE LUXEMBOURG FUNCTIONAL REGION



**BIERGERKOMMITEE
LËTZEBUERG 2050**
**OUR RECOMMENDATIONS
TO POLICY-MAKERS**

TOWARDS A
CLIMATE-NEUTRAL TERRITORY

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LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de l'Énergie et de
l'Aménagement du territoire

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PREFACE

By launching the international urban-architectural and landscape consultation Luxembourg in Transition in June 2020, it was obvious to me that bringing together strategic proposals for spatial planning and producing scenarios for the ecological transition by 2050 for the Grand Duchy of Luxembourg and its neighbouring territories could not be done without involving the citizens.

This is why I decided to set up a citizens' committee, the *Bürgerkomitee Lëtzebuerg 2050* (BK2050). Working in parallel with the three committees accompanying the consultation, the BK2050 was meant to discuss the solutions proposed by the consultation teams, submit its own views and make proposals that can serve as inspiration for the new Master Programme for Spatial Planning (PDAT) that is currently being designed.

When we talk about the future of our territory, we must certainly give women and men of all ages and backgrounds who live or work in our country the opportunity to express their opinions on these issues. Thus, the BK 2050 was a pioneering initiative in Luxembourg, a new milestone in the process of citizen participation, and I wanted the committee to become, throughout the process, a real laboratory of participatory and co-creative democracy. A laboratory in which each member, free of any political constraint and in complete independence, would be able to debate the role of spatial planning not only to cope with, but above all to provide concrete answers and solutions to, climate change and its undeniable impact on the territory and its natural resources.

In view of the recommendations set out in the following pages, the committee's objective of working in an autonomous and impartial manner has been achieved: these

recommendations reflect a diversity of proposals to which the citizens have dedicated themselves and which belong to them fully.

Many thanks to all the members of the committee for their dedication and commitment throughout the consultation process.

I would also like to thank Jürgen Stoldt and his team, who enthusiastically animated and managed the process.

The BK2050 was also accompanied by a scientific monitoring group who analysed the momentum created by this exceptional citizen process. Many thanks to the members of this group.

Finally, the experience acquired through the BK2050 will feed my reflections, together with the Department of Spatial Planning, for the implementation of a sustainable citizen consultation process. It will now also serve as a basis for the initiative launched by the Prime Minister, the Klima Biergerrot (KBR), which is part of Luxembourg's climate policy.

Claude Turmes
Minister of Energy and Spatial Planning

BIERGERKOMMITEE LËTZEBUERG 2050: MISSION AND WORKING METHOD

From January 2021 to January 2022, 30 citizens worked on behalf of the Ministry of Energy and Spatial Planning on recommendations on how, from their perspective, the "functional territory" of Luxembourg should evolve to achieve climate neutrality by 2050. This brochure summarises the most important information about the working process and then documents the results that the *Biergerkomitee Lëtzebuerg 2050* arrived at in the course of this year.

The framework: *Luxembourg in Transition*

The *Biergerkomitee* was part of the *Luxembourg in Transition (LIT)* initiative. This is a comprehensive project to develop land and urban planning, architectural, economic and ecological scenarios. At its core is the question of how the territory of Luxembourg and the border regions can develop in order to achieve carbon neutrality by 2050. LIT was launched in September 2020 and concluded at the end of January 2022. The consultation involved first ten, then six and finally four national and international expert teams composed of architects, urbanists, landscape planners and social scientists.

The findings and proposed strategies from this expert consultation are intended to provide impulses for the preparation of the *Programme directeur d'aménagement du territoire (PDAT)*. The reports and results of the various LIT teams can be found at: www.luxembourgtransition.lu

Parallel to the experts, citizens should also have their say within the framework of *Luxembourg in Transition*, in order to confront the regional and urban planning scenarios with the experience of the citizens directly affected. For this purpose, the *Biergerkomitee Lëtzebuerg 2050* was founded.

Task of the *Biergerkomitee*

The *Lëtzebuerg 2050 Biergerkomitee* was asked

- to be available for discussions with the different expert teams of *Luxembourg in Transition* during the elaboration phase;
- to develop an understanding of how Luxembourg should position itself to achieve climate neutrality by 2050;
- to formulate recommendations to policy-makers on how, from the citizens' point of view, the territory should be organised by 2050 in order that Luxembourg become climate neutral.

Initiator

This citizen participation was commissioned by the Ministry of Energy and Spatial Planning, Direction de l'aménagement du territoire (DAT). At no point did the ministry intervene in the process, limiting itself to providing the resources; the Minister of Energy and Spatial Planning, Claude Turmes, had only three opportunities to interact with the participants: at the initial meeting, at the beginning of the workshop phase and shortly before the conclusion of the process.

Composition

The participants were selected by the market research institute TNS Ilres. The composition of the group was required to reflect the social, linguistic and professional diversity of the country as much as possible. 5 of the original 30 participants were also to be cross-border commuters from Belgium, France or Germany. None of the participants should be involved in party politics.

A call was placed in the daily press and TNS Ilres additionally contacted about 1000 people from its own database. Around 250 people then registered their interest. From this group, TNS Ilres then put together the group that best represented the diversity of the country and its population in terms of age structure, professional background, origin, gender, etc.

Langues

Participants needed to have a passive command of all three official languages of Luxembourg (LU/FR/DE). In the discussions, everyone could choose to speak in the language that suited them best. This meant that translations could be largely dispensed with.

A demanding and time-consuming programme

Participants followed a dozen conferences with over 25 national and international experts in the first half of 2021. During these digital conferences followed by discussions, the group gained an overview of the challenges facing Luxembourg and its border regions in the wake of climate change.

In a second phase, starting in July 2021, the information was reflected upon, analysed and ordered. In a total of 7 working sessions, conclusions were drawn and the different positions discussed. The editing of the results took place in an open process until the end, which gave the participants time to formulate their opinions. Although it was not an explicit goal of the process to reach consensus on all points, the group successfully attempted to reach common positions.

Via online surveys, participants could evaluate the process and clarify organisational or content-related questions. An internal communication platform, where the group could also exchange information, gathered documents, video recordings and information.

Conferences

In the first half of 2021, 12 digital conferences were organised (they can be listened to at www.luxembourgtransition.lu/evenements) with

- François Gemenne**, University of Liège and co-author of the GIEC
- André Weidenhaupt**, Ministry of Environment, Climate and Sustainable Development
- Marie-Josée Vidal**, Ministry of Energy and Spatial Planning
- Lex Faber**, urban and spatial planner
- Christine Müller**, architect and spatial planner
- Denis Scuto**, historian, University of Luxembourg
- Andrew Ferrone**, climatologist and head of the meteorological service of the Ministry of Agriculture
- Guy Schumann**, hydrologist
- Laurent Pfister**, hydrologist and researcher at LIST
- Claude Felten**, agricultural engineer and teacher at the Lycée agricole, president of IBLA
- Georges Moes**, agricultural engineer and project manager at natur&environment
- Frank Wolff**, biologist and deputy director of the Administration de la nature et des forêts
- Philippe Gerber** and **Guillaume Drevon**, mobility researchers at the LISER
- Markus Hesse**, Professor of Urban Geography at the University of Luxembourg
- Julien Licheron**, researcher at LISER and President of the Observatoire de l'habitat
- Gilles Hempel**, director of the Agence immobilière de l'habitat
- Nico Steinmetz**, architect
- Hans Kollhoff**, architect and professor emeritus at ETH Zurich
- Tom Haas** and **Olivier Thunus**, economists at Statec
- Martina Holbach**, project manager at Greenpeace
- Claire de Boursetty**, director of the Luxembourg Sustainable Finance Initiative
- Estelle Evrard**, geographer and researcher at the University of Luxembourg
- Antoine Decoville**, geographer and researcher at LISER

Withdrawals

Of the 30 people who had started working together in January, six dropped out during the process. Three of them mentioned the heavy time burden or other commitments as the reason. Three people were disappointed with the concept (little added value of the conferences for them personally, concern about political instrumentalisation of the process, dissatisfaction with the emerging results,...).

Embedding in the political process

The recommendations of the *Biergerkomitee* will give valuable impulses to the Ministry of Energy and Spatial Planning for the elaboration of the *Programme directeur d'aménagement du territoire (PDAT)*. The PDAT is the document in which the government defines the major national planning guidelines and describes how it envisages the medium-term development of the territory.

Methodology and moderation

The consultancy *Stoldt Associés* was commissioned by the Ministry of Energy and Regional Planning to lead and moderate the *Biergerkomitee* in several languages.

Scientific monitoring

The facilitator team was accompanied by a monitoring group, which additionally ensured the integrity of the process:

- Sophie Federspiel, political scientist and political consultant, Berlin and Luxembourg
- **Dr. Léonie de Jonge**, Assistant Professor of Politics at the University of Groningen
- **Dr. Raphaël Kies**, political scientist at the University of Luxembourg
- **Tommy Klein**, market and opinion researcher, TNS Ilres Luxembourg
- **Peter Opitz**, organisational development consultant, Zurich and Luxembourg

The University of Luxembourg and the University of Groningen are preparing an evaluation of the process.

Results

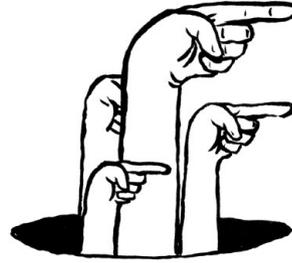
It quickly became obvious that the group would take a broad approach to the question posed to them. The prerequisites for a climate-fair policy were discussed not only in the narrow field of regional planning, but also in the general context of political, social and economic developments. The moderators had suggested that the results be summarised in three documents:

- Situation analysis of Luxembourg (strengths and weaknesses of the country on the way to climate neutrality);
- Guidelines and Principles for a Policy of Transition;
- Recommendations with a focus on spatial planning.

This structure was approved by the overwhelming majority of the participants and was maintained until the end. The group succeeded in bringing the sometimes very divergent positions closer together in the course of the discussions and in finding consensus or at least compromise solutions on all points.

GUIDELINES FOR CHANGE

NINE PRINCIPLES FOR A SUCCESSFUL TRANSITION POLICY



Every policy needs guidelines to direct its actions. The members of the *Biergerkommittee* propose the following nine principles as a basis for climate policy and spatial planning.

1 Climate protection measures must be democratically legitimised and comprehensible.

In order to bring to life the largely abstract climate protection goals, the government will have to introduce a large number of drastic measures in the next few years and parliament will pass corresponding laws. These climate protection measures must have robust democratic legitimacy and be supported by a majority of society. The population must be actively involved in the decision process through transparent information and suitable participatory instruments such as "citizens' councils".

2 Individual freedom and social responsibility.

We all agree that the freedom of the individual is an enormously precious commodity and represents a central value for our democratic society. Incentives should therefore always take precedence over prohibitions in climate policy and, if possible, citizens should always have several options for action. But freedom must be expressed in a framework that does not harm the interests of future generations and people in the global South. Individual freedom ends where it limits the freedom of others. Therefore, an unnecessarily high ecological footprint is not an expression of personal freedom, but of irresponsibility.

3 Climate protection measures cannot rely solely on voluntarism.

A policy that places responsibility primarily on individuals and their behaviour is unrealistic and dishonest. Voluntary frugality or individual renunciation can only appeal to a minority under the current working and living conditions. Most people, for a long time to come, will try to stick to their usual lifestyles including eating habits, holidays, consumption and mobility preferences. When it comes to their profit margin, companies will not voluntarily give up benefits either.

4 Climate protection measures must be perceived as equitable.

However, if one takes the Paris and Glasgow agreements and the findings of science with regard to climate change seriously, drastic measures are inevitable in the coming years. People will only accept these changes if they understand and perceive them as just - i.e. if all parts of society are affected equally. If, for example, the poorer members of the population are given the impression that they are the "losers" of this policy and the rich can buy their way out, or if urban dwellers are favoured by mobility policies over those living in less densely populated of the country, there will be resistance and the measures will be difficult to implement.

5

Climate protection measures must be based on science.

The "best case scenario" of the IPCC is not the most likely for the development of the world climate. The proposals for climate change mitigation put forward by politics, business, research and society must not be based on the most optimistic scenarios, also in Luxembourg, but must focus on preventing the "worst case" scenarios. To this end, science demands a radical transformation of many areas of life and the economy. In parallel (not as a substitute!), massive investments must be made in the development of future technologies that could provide solutions to some aspects of the climate challenge.

6

Climate policy must be linked to a positive message

The phasing out of the fossil age will not only bring austerity, but also create entirely new opportunities: technological and economic, but also social and individual. Public health and personal well-being will benefit from a less resource-intensive and consumption-oriented lifestyle.

7

The framework of our economic system must be adjusted.

Some aspects of our economic system must also be adapted. Public goods such as the atmosphere, water, air, biodiversity and soil must be protected from economic exploitation or be included in the cost-benefit calculations of companies and farms in the form of taxes, levies and incentives. Alternatives to our resource-intensive economic model urgently need to be discussed, developed and implemented, at national and European level. Democratic decision-making must also be protected from the overwhelming influence of short-term economic interests.

8

International cooperation before national interest

The global fight against climate change can only be successful if even small nation states like Luxembourg put their short-term interests aside. In this context, questions of fairness and justice are at stake on the regional (cross-border) as well as on the European and global level.



9

CO₂ balance versus ecological footprint

The risk is significant that Luxembourg will fulfil the requirements of the Paris and Glasgow Agreements without making a real contribution to mitigating the climate catastrophe. From an accounting point of view, it would be sufficient to switch domestic energy consumption completely to imported electricity, since electricity production abroad is not counted in the country's carbon footprint. Similarly, the CO₂ emissions in imported products are not taken into account.

In order to bear its share of responsibility, Luxembourg must instead focus on reducing its high ecological footprint and also take into account the CO₂ emissions of imports.

LUXEMBOURG: STRENGTHS AND WEAKNESSES OF THE COUNTRY ON THE WAY TO CLIMATE NEUTRALITY

In order to arrive at recommendations, the *Biergerkomitee Lëtzebuerg 2050* first made an analysis of Luxembourg's specific situation. From today's perspective, what are the strengths, what are the weaknesses, where are the challenges and where are the opportunities for the functional territory of Luxembourg on the way to climate neutrality by 2050?

STRENGTHS

1 Relatively favourable climatic conditions, forest and water resources

The rainfall in our region, which will be less favourable in the future but still sufficient, is the basis of a rich biodiversity and offers relatively good starting conditions for climate adaptation. One third of the country is covered by forest. Pastures and meadows make up another quarter of the territory. These areas can serve as carbon sinks and, if used sustainably, have a high biodiversity potential.

2 Manageable size of the country

In principle, the manageable size of the country allows for easier data collection and impact analysis of climate protection measures and, if necessary, rapid adaptation to the social, political and economic environment.

3 Statehood

Statehood and the greater degree of sovereignty that comes with it make it possible to take adapted decisions for the specific situation of the territory. The immediate border regions can also benefit from Luxembourg's statehood.



4 Sound financial situation of the public sector

The currently comfortable situation of public finances can, with the right priorities, make it easier to finance the upcoming transition and make it socially acceptable.

5 Health system and welfare state

Luxembourg's health infrastructure and social protection are first class. These advantages must be preserved and made sustainable.

6 Multilingualism and cultural diversity

The high cultural and linguistic diversity in the country makes it easier to adopt ideas and techniques from different cultural areas. The competences of foreign experts can be used without great difficulty.

7 Centrality

The country's location in the most dynamic part of Western Europe (within a 300-kilometre radius are the ports of the English Channel, the Ruhr, Frankfurt, Paris and Zurich, as well as transit routes to northern Italy) brings ideas, people, capital and goods to and via Luxembourg.



Ondina

“If life on our planet is to last, we need to protect it.”

WEAKNESSES



1 Delayed conversion of agriculture and poor conservation status of fauna and flora

Luxembourg's agricultural policy is making little progress in building a sustainable and climate-conscious agriculture that promotes and does not destroy biosystemic balances. In particular, the dairy and meat industry, which produces for export and is largely dependent on nutrient imports (soya), represents a CO₂ and methane-intensive misdevelopment. All that remains in the country at the end of this "production" is manure and money (often in the form of debts for the farms).

Conventional agriculture based on pesticide use has been proven to be the main driver of the rapid depletion of biodiversity, along with urbanisation and land consumption. Dubious compensation measures and insufficient nature conservation (even in Natura2000 areas) are no means to stop the development.

2 Land pressure, urban sprawl and fragmentation of the landscape

Even though Luxembourg looks very green from above, it is an extremely fragmented territory. Population growth and the increasing requirements for housing, new commercial areas and infrastructure lead to an enormous land consumption compared to other European countries. Valuable agricultural land and necessary floodplains are being built over. There are currently no signs that the rate of soil sealing (currently at 0.5 hectares per day in Luxembourg) would slow down to zero by 2050 – as targeted by the EU Commission.



Eliane

“I can't get rid of the feeling that it's almost too late, looking at the snail's pace that most countries are moving at to tackle climate change.”

3 Unbalanced spatial structure

The country's spatial structure has developed unfavourably: Jobs are concentrated in the centre and south of the country. The villages and smaller communities in the periphery have developed into dormitory communities without their own functions and offers. Too many shopping centres are bleeding the inner cities dry. For most people the car is necessary even for small shopping.

4 Public transport and soft mobility

In the north, east and west of the country, public transport is not sufficiently developed to provide an alternative to the private car. Soft forms of mobility are still not prioritised in the public space or the infrastructure is simply not provided for (such as bicycle lanes and footpaths between villages).

5 Dependence on energy imports

Luxembourg produces only a very small part of the electricity consumed in the country. Nuclearpowered energy is imported from France (for industry) and electricity is imported from coal- and gas-powered plants from Germany (for private consumers). With further electrification of the transport, building and industrial sectors, dependence on electricity imports will continue to grow. Although these electricity imports are not attributed to the country in its CO₂ balance, they are in no way CO₂-neutral for the atmosphere.

6 Financing the fossil fuel economy and dependence on fuel tourism

As the second largest hub for investment funds in the world, Luxembourg contributes significantly to the financing of the fossil economy. The dependence of tax revenues on fuel tourism also leads to a disproportionate weight of the oil industry on national (climate) policy.

7 Prosperity

Even if one subtracts the consumption of cross-border commuters and “fuel tourists”, the country's ecological footprint is enormous and corresponds to rich cities like Hamburg, Munich or London. The high consumption level of most households will make it difficult to reduce the country's carbon and ecological footprint in the coming years.

8 Exaggerated importance of consumption for shaping individual lives

The decades-long focus on the importance of material consumption for personal fulfilment hinders the emergence of alternative, more modest lifestyles. Consumption is now seen by many people as the most important form of leisure and as a means to express identity.

9 Lack of social momentum for transition

The people who actively support a transition towards a more resilient and climate-conscious model of society are still too few to generate strong momentum.



Frankie

“It’s essential that every single citizen is aware of the importance of neutralising as much CO₂ as they produce.”

10 Social polarisation

The economic growth of recent years, with its effects on the housing market in particular, has led to social polarisation in Luxembourg (the income gap is widening). However, an adequate answer to the question of social justice will be the most important precondition for the acceptance of most climate policy measures.

11 Lack of awareness with regard to the seriousness of the situation

Many people in Luxembourg have only a vague idea of the consequences of climate change. Others believe that by sorting waste, eating organic food and buying an electric car, they have already done their part to address the problem. Finally, a significant part of the population tries to ignore the changes ahead.

12 Procrastination at the political level

The entire institutional setting of the country is directed towards the protection of private property. It is almost inevitable that professional politicians align themselves with this principle and, despite the urgency of the situation, postpone the moment of climate action.

13 Incomplete and misleading information

The information that government, administrations and research institutions provide to the public about the urgency of the situation and the possible strategies against climate change is often misleading, incomplete or difficult to understand.

RISKS



1 Massive pressure on nature and biodiversity

Many native bird species are threatened with extinction in Luxembourg. The condition of many habitats (especially open land and watercourses) is worrying. The main causes of this rapid deterioration are the cultivation methods of intensive agriculture as well as urbanisation and the progressive fragmentation of the country.

2 Destruction of the landscape and traditional architecture

The growth path of Luxembourg's economy and the accompanying demographic pressure threaten to lead to further urban sprawl and aesthetic deterioration of the landscape: soulless investor architecture in place of

historic village architecture, multi-storey apartment buildings in place of existing terraced houses, disappearance of traditional landscape elements such as "Bongerten" and village gardens. The identification of the population with the built and natural heritage and thus the respect for their value is at risk of vanishing. Ultimately, buildings and landscapes are considered only for their economic value.

3 Gentrification of the country

The refusal of many municipalities to provide social housing, the development of land and property prices and the de facto inability or unwillingness of all actors in the housing sector to build more than 3,000 to 4,000 dwellings a year (out of a need of around 6,000) risks leading to gentrification on a nationwide level. Less affluent families are moving from the centre to the

periphery of the country. People still clinging to the dream of a detached family house are moving across the country's border. The capital first and eventually the entire country are losing social diversity and becoming an island of the rich, the wealthy and their heirs.

4 The excessive orientation of the Luxembourg economy towards the financial centre

The strong orientation of the Luxembourg economy towards the financial sector leads Luxembourg to neglect more sustainable fields of activity. The employees for the current orientation have to be recruited from abroad and they cause additional pressure on the housing market. By using the excuse of the necessary financing of the national pension system, other, possibly more sustainable development paths are excluded.

5 Lack of cooperation and cohesion in the border region

Cooperation with the immediate border regions, which are directly dependent on developments and decisions in Luxembourg, is still insufficient and one-sidedly oriented towards Luxembourg's interests. This situation holds great potential for conflict, especially in times of crisis, as people on either side of the border do not see themselves as a community of fate.

6 Increase in social polarisation

Social differences are increasing. On the one hand, there are people who are not in regular employment or who work in the low-wage sector and who mainly move to the periphery or abroad; on the other hand, there are those who are employed in the high-wage sectors (finance, corporate law, public service), the majority of whom live in the centre or within the national borders. This polarisation expresses itself spatially, as described above, and leads to significant clashes of interest.



Sue

“Luxembourg needs a committed population! Only when we all realise that ‘business as usual’ is impossible in the future will individual, every day life change for the better.”



Michèle

“Luxembourg, with its political stability and sound financial situation, has the opportunity to achieve carbon neutrality in a just and socially acceptable way. However, this transition is only possible if national decision-makers are prepared to take concrete measures both immediately and in the long term.”

7 Declining credibility of democratic decision-making

The political non-integration of large parts of the population (cross-border commuters, foreigners, young people) leads to a weakening of representative democracy. Participatory and direct democracy approaches are not sufficiently used to make people an active part in the political process.

8 Lack of reporting and information

The media seem to be partially overwhelmed with the mission to provide a comprehensible, constructive and honest reporting on climate change and its political, social and economic consequences. There are already signs that the population is disoriented in the face of the complexity of the problems and is adopting a basically sceptical attitude with regard to possible solutions.

OPPORTUNITIES



Sandra

“As a cross-border worker, it was great to take part in a project like this; we are also affected directly by many decisions in Luxembourg. Our work together was respectful and rewarding, so that we came to conclusions that we could all agree with.”

1 Protection of natural resources and promotion of biodiversity

By placing a high priority on nature conservation and in particular through a consistent reorientation of its agriculture, Luxembourg could still position itself as one of the ecological pioneers in Europe. The quality of life of the population and the attractiveness of the country would increase, the drinking water reserves, which are indispensable for the future, would stabilise and the biodiversity could regenerate.

2 A climate-neutral food and agriculture policy

The most efficient way to achieve a more climate-neutral life style in Luxembourg would be to promote a diet that increasingly avoids meat and dairy products and gives preference to regional and seasonal products. The prerequisite, however, would be a clear reorientation of Luxembourg's agriculture towards land- and soil-based animal husbandry and towards products that are consumed in the country itself. In this way, the nearly complete dependence on food imports could be reduced to some extent.

3 Sustainable building and new housings

Resource-saving stone and timber construction methods and the preservation of valuable building stock could increase the lifespan of buildings again to periods of more than a hundred years and massively reduce CO₂ emissions and the ecological footprint of the construction industry. The circular economy must not be misused as a pretext for constructing buildings with short lifespans. Experimenting with new forms of construction and housing (container houses, tiny houses, communal living, etc.) also offers opportunities.

4 Increased cooperation in the border region

A strategic and proactive cooperation with the municipalities on the other side of the borders could release great potential. For this, the Luxembourg side would have to recognise that it shares responsibility for the ecological, cultural and economic development of these regions and for the people living there while working mostly in Luxembourg.

5 A more resilient economic development

The Luxembourg economy is highly dependent on capital inflows from abroad and on developments that it does not control. In order to survive in times of crisis, Luxembourg could in the future focus more on the development of regional economic cycles and strengthen the local economy. A network of ecologically oriented small businesses and cooperatives can offer the cornerstone for a sustainable and less crisis-prone economic model.

6 Financing the energy transition

A strategic orientation of the Luxembourg financial centre towards sustainable and climate-neutral investments while consistently preventing greenwashing could give Luxembourg a prominent role in financing the post-carbon economy.

7 Stronger political participation

The enormous challenges ahead are an opportunity for massive political engagement. Urban and regional planning in particular needs the participation of the entire population to set the course for a climate-neutral territory.

8 Changing goals of the education system

The Luxembourg education system could focus much more on climate change, resource consumption and global injustices in order to promote awareness among young people. These educational goals would of course also have to be lived up to in everyday school life (e.g. transport to school) and by all adults involved.

44 RECOMMENDATIONS FOR A CLIMATE NEUTRAL TERRITORY

The recommendations listed below are those that seem particularly important and urgent to the *Biergerkomitee Lëtzebuerg 2050* in order to achieve a climate-neutral territory by 2050.

Of course, the members of the group are very much aware that they are not experts in the various fields and that they have not been able to address all aspects of the issue. The list of recommendations is therefore necessarily incomplete and expandable.

For this reason, the *Biergerkomitee* urgently asks for an overall concept developed by experts that shows a realistic way to achieve the nationally and internationally set climate goals - a concept

- which must be discussed with society and the affected stakeholders on an equal footing,
- which is passed into law by a broad majority in parliament
- and which is implemented without delay by government and relevant ministries and administrations.



Yolande

“The Biergerkomitee was a wonderful, positive experience. Many different personalities, different points of view, different opinions. What we all had in common was the sense that climate change needs to be addressed NOW.”



Governance

- 1 The time for pilot projects and Sunday speeches is over. Government, MPs, local authorities, political parties and administrations must face the urgency of the climate issue.
- 2 Climate policy and spacial planning must become transversal policy areas. All ministries and administrations are concerned. This means that all policy areas, especially the ministries of agriculture, interior and economy, must reformulate their goals and orient their policies towards sustainability and carbon gas neutrality.
- 3 Cooperation between the state and the municipalities and among municipalities must be improved. An efficient way to break the multiple blockades and share responsibilities more clearly would be to eliminate the possibility of holding national and municipal political mandates simultaneously.
- 4 Cross-border cooperation with neighbouring municipalities in France, Belgium and Germany in the areas of transport, housing and municipal infrastructures must be intensified and not only serve the immediate interests of Luxembourg.
- 5 Citizens, civil society and science must be much more involved in the general debate and decision-making process leading to the country's climate policy, especially to compensate for the disadvantages of the electoral system.

- 6 Advisory bodies such as the National Sustainability Council (CSDD) or the bodies created under the PNEC must be provided with extensive resources and also be staffed with representatives of the social sector. The planned Klima-Biergerrot must be made permanent, given a clear mandate and must not be merely an alibi.

Regional planning and urban development

- 7 The fragmentation of the landscape must be stopped at all costs. This also includes an immediate moratorium on bypasses, which, if planned at all, must be close to localities and not in the open countryside or in Natura2000 areas.
- 8 Not every village needs to grow. At present, population growth is one of the few ways for a municipality to improve its financial situation. In the future, villages must also receive support if they want to grow less and are located away from the development zones (CDA).
- 9 On the other hand, development centres must grow within their building perimeters. Effective taxation must be used to promote urban densification and prevent vacancy, so that public transport and other important infrastructures are economically sound.
- 10 In order to bring living and working places closer together, jobs must be distributed harmoniously among Luxembourg's different development centres. The concentration of more and more office buildings in and around Luxembourg City must be stopped.
- 11 Building perimeters may no longer be expanded as long as the existing land reserves in the PAGs are not built on. Undeveloped parcels within the perimeters must be mobilised via a special tax.
- 12 In urban and district planning, priority must once again be given to a mix of uses. Village and city centres must offer again all relevant services. As regards densification, it is not necessary to automatically build upwards; depending on the context, one might prefer smaller solutions. In order to adapt to the different needs and local conditions differentiated building forms are to be preferred, such as narrow terraced houses, buildings with courtyards, stacked housing units etc.
- 13 Alternative housing, such as tiny houses, ecovillages, prefabricated houses or shared flats, should be allowed and promoted by law and provided for in the PAGs of the municipalities.
- 14 The car-oriented city must be dismantled, and public space must be made accessible to other transport users and stakeholders. The Cloche d'Or neighbourhood is in this context a negative example with the complete sealing of over 60 hectares, the absence of a local resident community coupled with an infrastructure solely to promote consumerism. The transformation of such neighbourhoods into residential areas more adapted to nature and people, where public space does not belong only to car drivers, must be addressed immediately.

Resource-efficient mobility

- 15 Municipalities and villages in the countryside must be connected via an intelligent mobility offer (mix of public transport, car sharing, flexibus, cycle paths, ...) to form independent functional areas. Only in this way can the accessibility and availability of retail, health and public services be guaranteed throughout the country.
- 16 The nationwide shortage of cycle paths and footpaths (not only in the conurbations, but also between villages) must be solved as quickly as possible.
- 17 The purchase of passenger cars that require an excessive amount of resources due to size or energy consumption, must be curbed by a greatly increased registration tax. Vehicles in this category must not be subsidised with state funds (e.g. subsidies for electric vehicles). Instead, the purchase of smaller vehicles with reduced energy consumption should be encouraged.
- 18 In order to reduce commuting, home offices and co-working spaces must be encouraged by companies and legislators.

Unsealing and protecting soils

- 19 Complete sealing that is not absolutely necessary should be prohibited (stone front gardens, completely sealed public spaces, car parks, etc.). Existing sealing that is not absolutely necessary must be broken up, at least on state and municipal land.
- 20 Densely built urban areas need to be greened and shaded. Cities must be conceived in a way to store coolness and moisture during longer periods of heat.
- 21 The establishment and maintenance of community gardens or garden colonies must be systematically promoted by municipalities and the state.
- 22 Luxembourg urgently needs - as projected in the government programme - a comprehensive soil protection law that covers precaution, long-term conservation, deconstruction of buildings and unsealing of soils.



Alexander

“Luxembourg has the potential to play a leading role in cross-border climate policy if we act carefully and effectively.”

Architecture

- 23 The materials used in construction must be healthy, sustainable and recyclable, bind more CO₂ than is generated during production and, ideally, come from regional production.
- 24 As a rule, the preservation and energy-efficient refurbishment of existing buildings should have priority over demolition and new construction because of the grey energy bound up in them.
- 25 When awarding contracts for public construction projects (state, municipalities, Administration des bâtiments publics, CFL...), it is not only the price that should count. Resource and energy consumption of the materials used (especially concrete) must be included as a criterion in public procurement decisions.
- 26 Valuable roof areas and parking spaces must - wherever possible and rational - also accommodate other functions (greening, roof gardens, solar panels, playgrounds, etc.).
- 27 Buildings should - wherever possible and reasonable - be equipped with rainwater cisterns and with a second water circuit for grey water (for toilet flushing and garden irrigation).
- 28 New buildings should meet the aesthetic and structural standards that have proven themselves in the building tradition of European urban and village architecture. It is up to the municipalities to demand and enforce these standards in building projects.

Water management, sustainable agriculture and protection of biodiversity

- 29 Water protection in general and drinking water protection in particular must have absolute priority over all other considerations.
- 30 Nature conservation areas and Natura2000 areas must be effectively protected and developed. Old forests that store large amounts of CO₂ must not fall victim to further bypasses. The well-intentioned but often ineffective or even counterproductive instrument of compensation measures must be subjected to a critical evaluation.
- 31 Sustainable agriculture that protects biodiversity (including organic farming, permaculture, agroforestry, etc.) must be promoted with all available means and applied in term to a large part of the farmland.
- 32 Support payments under the Common Agricultural Policy (CAP) must be closely linked to the application of conservation measures. Farmers must be sensitised and helped to escape the productivity trap.
- 33 The ever-increasing specialisation of Luxembourg's agriculture in meat and milk production must be halted, against the background of its massive CO₂ and methane emissions. Instead, sustainable meat and milk production must be pursued, depending on the available pasture land. In addition, agricultural production



Marco

“An unnecessarily high ecological footprint is not an expression of personal freedom, but of irresponsibility.”

for the local and regional market (vegetables, fruit ...) must be promoted according to the principles of sustainable agriculture.

- 34 Awareness raising for healthy and balanced nutrition and the corresponding offer (e.g. in public canteens) must be expanded.

Growth and economy

- 35 The current resource-intensive growth orientation of the Luxembourg economy must be slowed down to mitigate climate change. The question of pension financing must not be used indefinitely to defend an economic model that is not compatible with a worthwhile future. Alternative scenarios must be developed and discussed.
- 36 The local and regional economy should be favoured wherever possible. Craft and small businesses, start-ups and freelancers must be given every possible support as pillars of a resilient and local economy and be able to settle in the town and village centres.
- 37 The entire economic production and distribution and private consumption must be reviewed with regard to climate protection, resource optimisation and waste avoidance. This requires not only appropriate legislation, but also effective communication so that companies and private individuals support these efforts.



Paul

“Imagine a world where reason wins over money.”

38 The phase-out of fuel tourism should be finalized by 2030 at the latest. This requires a clear decision, the corresponding stages and a plan on how to cushion the budgetary consequences.

39 The reserves of the national pension fund and other public funds must be withdrawn from fossil investments without further delay. Public and private funds must be measured by the extent to which they finance the transition from fossil to renewable energy.

40 All national electricity imports should be switched to green power as soon as possible.

Information and transparency

41 The information of the population about the causes and consequences of climate change must be massively improved.

42 The information on CO₂ reduction measures must also become better, more transparent and more comprehensible. In addition, consistent monitoring is necessary to check the effectiveness of these measures and to be able to react promptly with adjustments.

43 Efforts against food waste must be intensified and systematised. Awareness-raising for a less meat- and dairy-rich diet must be expanded. The CO₂ balance of food must be indicated.

44 Climate protection, sustainability and healthy nutrition must become priority educational goals for Luxembourg schools and be learned in practice.



Liz

“In discussing the spatial planning for 2050, the Biergerkomitee has tried to give a voice to Luxembourg society and to contribute to a more democratic process, which in my opinion should also be applied to other domains in order to bring politicians and citizens closer together.”

WHAT HAPPENS NEXT?

ACTIVE INVOLVEMENT OF CITIZENS!

The *Biergerkomitee Lëtzebuerg 2050* is one initiative in a chain of similar processes whose aim is to prepare political decisions face-to-face with citizens.

In 2018, the Ministry of Spatial Planning organised a citizen participation with regional ateliers on general issues of spatial planning (the final document can be found on the [Portail de l'aménagement du territoire](#)). This was followed in 2021 by the Luxembourg in Transition initiative with the *Biergerkomitee Lëtzebuerg 2050* presented here.

In 2022, the Ministry of State is organising a national citizens' climate council (*Klima Biergerrot*) to develop proposals on how to accelerate Luxembourg's climate action. From autumn 2022, climate assemblies will follow throughout the country, organised by CELL, the Center for

Ecological Learning. The major social, political and economic challenges that all countries must address in the wake of the climate crisis will only be met through the active and continuous involvement of citizens.