



Observatoire
de la Politique
Climatique

The OPC is a scientific
council currently composed
of seven members



The report and the abstracts in German,
French and English can be downloaded here

The OPC's mission encompasses advising on projects, actions or measures that may have an impact on climate policy; **scientifically evaluating the measures carried out or envisaged** in the field of climate policy and to **analyse their effectiveness**, as well as to **propose new measures**;
to write an annual report for the Government on the implementation of the climate policy; and to propose research and studies in relevant fields.

The Government of the Grand Duchy of Luxembourg – more precisely the *Government in Council* – nominated the members of the '*Climate Policy Observatory*' - (OPC; Observatoire de la politique climatique) in October 2021, which was set up in accordance with Article 7 of Luxembourg's national climate law. The Observatory may issue opinions on its own initiative.



Andrew FERRONE
President



Mirjam KOSCH
Vice-President



Enrico BENETTO



Sabine DÖRRY



Claire DUPONT



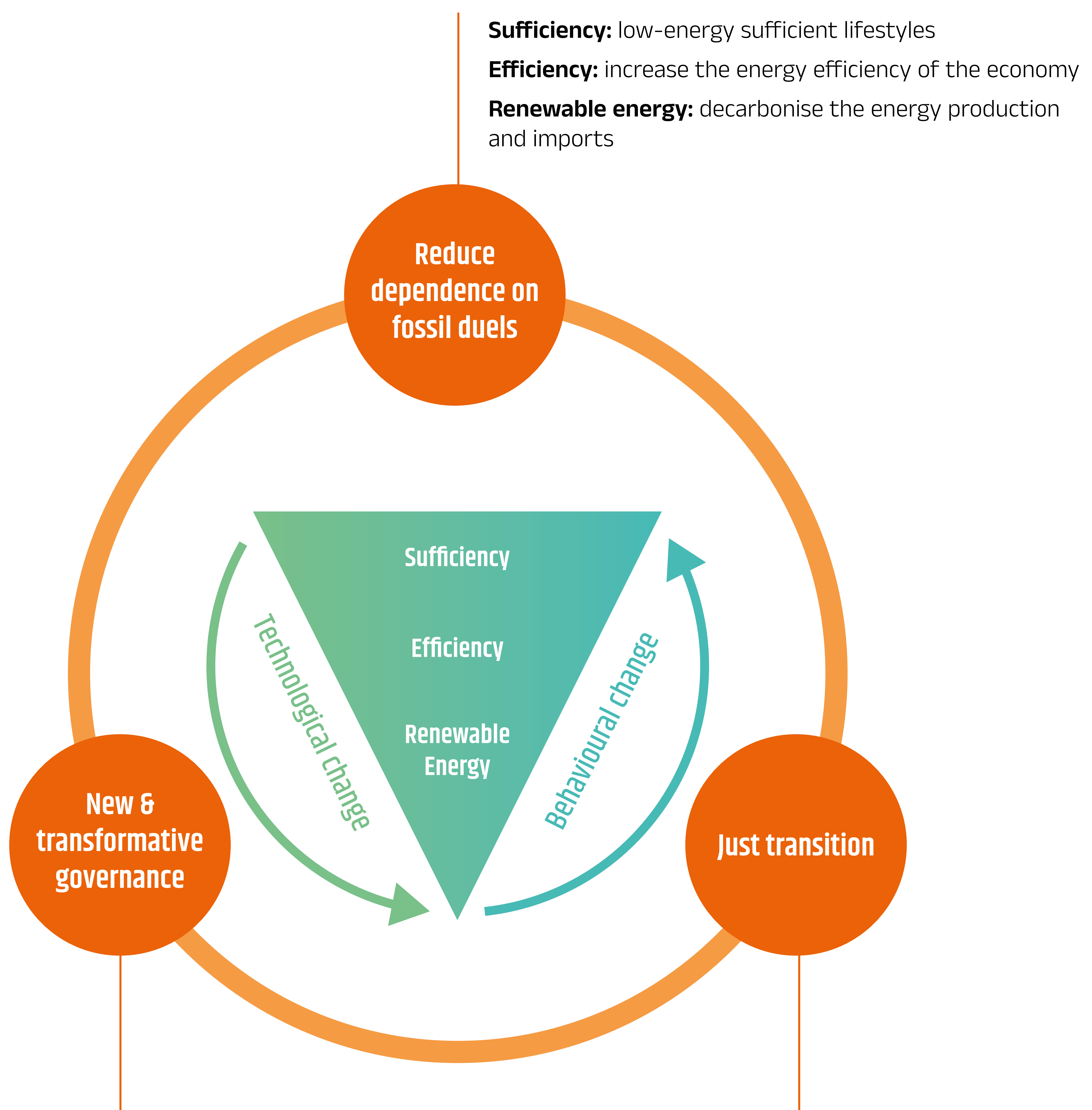
Ariane KÖNIG



Jean-Pascal
VAN YPERSELE

Principles for a rapid and just transformation towards a sustainable and decarbonised society

In order to achieve the 2030 goal and the climate neutrality goal in 2050 at the latest, systematic changes need to be implemented. The OPC recommends that further climate mitigation policies be guided by the following principles.



Integrated governance: coherent policy goals across governance levels and sectors

Participative governance: enable meaningful participation of communities, groups, citizens, and other stakeholder groups

Fair governance: alleviate inequalities across generations, rural/urban communities, minority groups, etc.

What are the costs, benefits, and risks associated with a policy?

How are these costs, risks, and benefits distributed?

How can we evaluate the policies socio-economic impacts?

Recommendations for the building sector



In the past 15 years, emissions in the buildings sector more or less stagnated, reaching a level of 1.7 Mt CO₂eq in 2021. **This is clearly above the target of 1.5 Mt CO₂eq.** Comparing the stagnating emission trajectory from the past with the target path for the future, it is clear that substantial additional policy measures will be needed. The following transformations are needed to drastically reduce greenhouse gas (GHG) emissions in Luxembourg's buildings sector:



Reduce floor area per person



Require landlords to invest in renovations of leased homes or apartments



Reduce ambient temperature in homes, apartments and offices



Promote resilient buildings



Ban fossil heating systems

Recommendations for the transport sector

In the past 15 years, emissions in the transport sector decreased, reaching a level of 4.9 Mt CO₂eq in 2021. This is below the target of 5.3 Mt CO₂eq. However, 2020 and 2021 levels were strongly influenced by the Covid-19 pandemic. The following transformations are needed to drastically reduce GHG emissions in Luxembourg's transport sector:

▲ **Land use and urban planning to reduce space for cars**

▲ **Develop plans for a 15-minute city**

▲ **Promote working from home**

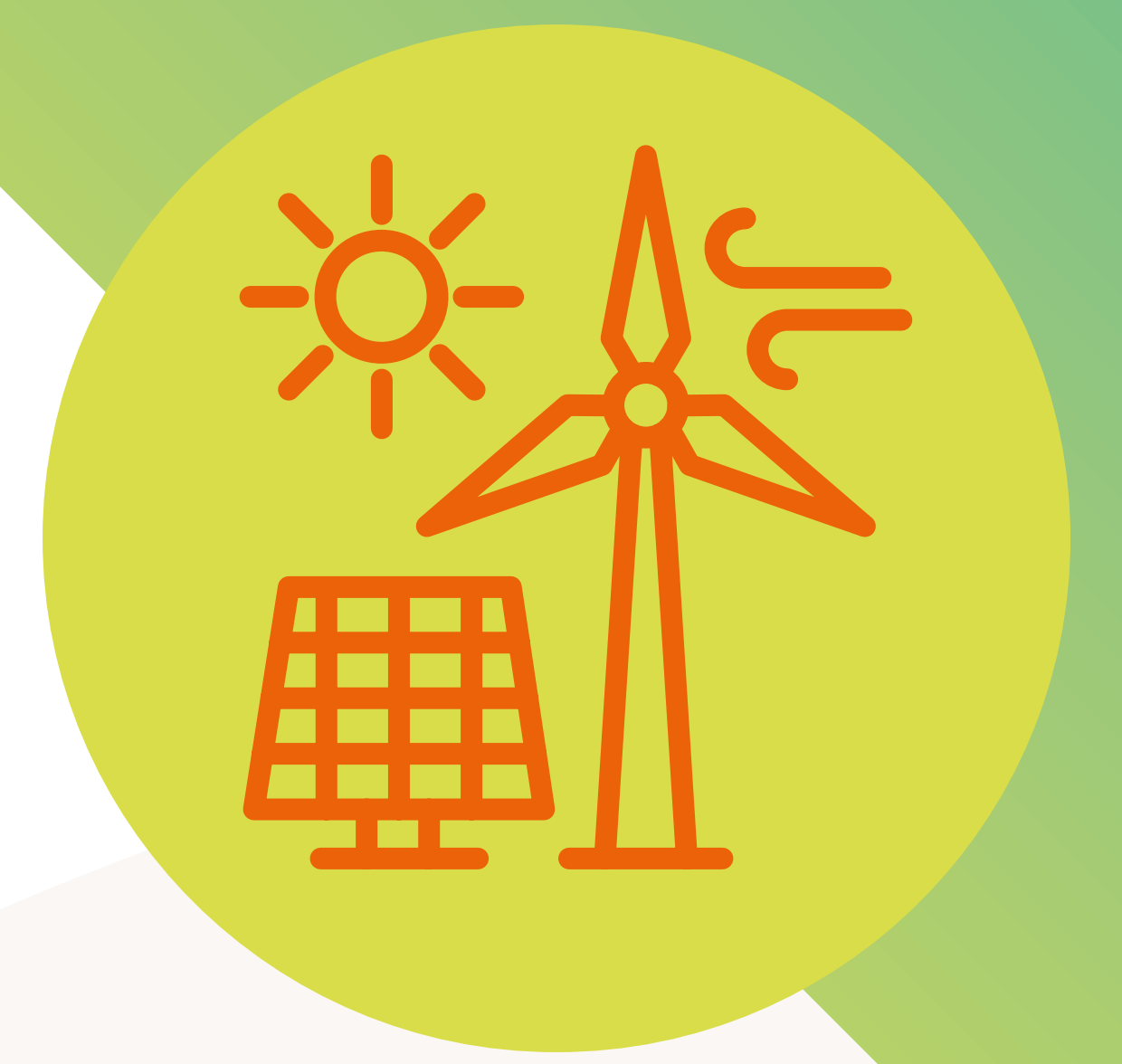
▲ **Incentivise the modal shift from a car-centric to a shared, soft mobility system**

▲ **Increase share of electric vehicles (EV) and ban fossil fuel vehicles**

▲ **Spatial planning efforts to make it easier to benefit from the excellent initiative to provide free public transport**



Recommendations for energy systems



The energy networks are closely linked to the buildings and transport sectors, as primary users of energy, and their sufficiency measures. The linkage is expected to become stronger in the future as decarbonisation of building and mobility will heavily rely on electrification. As a result, increasing the generation of cleaner electricity and thereby reducing the dependency on imports from foreign markets is a key strategic move that should be carefully considered and planned.



Continue and strengthen the measures in place aiming for a reduction of final energy demand



Increase the capacity of renewable energy production and thereby decrease the dependency on imports from foreign markets



Increase the share of renewable power production

A share of 50–70% of domestic electricity self-generation from renewable energy sources in Luxembourg is foreseen by the year 2050 (Creos 2020), following a 25% share in 2030 according to the “Plan national intégré en matière d’énergie et de climat”. Luxembourg is also accelerating the deployment of small-scale photovoltaics. A range of incentives will be deployed according to the PNEC to increase both small-scale and large-scale renewable energy production.

Recommendations for the food, agriculture and forestry sector

In terms of a Just Transition towards a sustainable society and the deep decarbonisation required to meet these goals, the management of land-use climate interactions in agriculture and forestry has several important roles to play:



- ▲ **Shift to balanced, sustainable healthy diets**
- ▲ **Reduce food loss and food waste**
- ▲ **Reduce methane and nitrous oxide emissions in agriculture**
- ▲ **Increase efficiency in extracting valuable resources**
- ▲ **Minimise dependency on production-related inputs**
- ▲ **Promote carbon sequestration on agricultural land in woody structures and soil**
- ▲ **Promote carbon sequestration in healthy and resilient forests**
- ▲ **Reduce net land take from about 0.5 ha per day to 0 ha per year**
- ▲ **Promote ecosystem restoration, and planting trees in urbanised areas**

Recommendations for the financial sector



Finance is often seen the key in unlocking strategies to mitigate (and adapt to) climate change and related societal and economic challenges.

In this spirit align and strengthen national co-financing to industrial/economic investment programmes, e.g. the “Fit for 55” and circular economy, both of which are pillars of sustainable industrial and economic development, and continue investment to reduce Luxembourg’s GHG emissions, specifically in the industries analysed in this report.



Maintain public long-term spending on projects that lead to and/or support sustainability transformation



Attract sustainable financing for sustainable projects/investments with a particular focus on Luxembourg and the Greater Region



Identify financial support for sustainable initiatives at the community level