Towards a local experiment in travel-based carbon rationing

Ongoing research
Begin: December 2021
End: July 2022

The Mobile Lives Forum is exploring the idea of carbon rationing as an alternative to carbon taxing. Following the projected plan to implement a nationwide carbon rationing scheme carried out in 2021, a new team of students from the Master’s degree in Energy, supervised by Arnaud Passalacqua, will design a local experiment: what choices, strategies and technical solutions should be recommended to elected officials who wish to experiment the carbon rationing applied to travel on their territory?

Research participants

- Arnaud Passalacqua
- Master Energie Université de Paris

Introduction

The Mobile Lives Forum is exploring the idea of carbon rationing as an alternative to carbon taxation. Taxation is criticized as being unfair as it disproportionately affects the poorest households and it is inefficient because it has little effect on the lifestyles of the richest members of society, those who pollute the most. Rationing would have at least two advantages over taxation: setting a national cap on CO2 emissions, and giving each French person the right to emit the same amount of CO2, regardless of their financial means.

In 2020-2021, a team of six students in the Master's program in Energy, supervised by engineer and transport historian Arnaud Passalacqua, worked on a scenario for implementing a nationwide carbon rationing scheme. The Mobile Lives Forum also documented an experiment conducted in the town of
Lahti, Finland, where a carbon trading scheme was set up, providing each resident with a carbon budget for travel, which they managed via a mobile app. ¹

**Objectives**

For 2021-2022, the Mobile Lives Forum has enlisted a new multidisciplinary team from the Master's degree in Energy, comprising of 8 students (engineers, political scientists,...), to design a local experiment in carbon rationing, applied to inhabitants' trips on a voluntary basis, and at the scale of a given territory in France.

This experiment would aim to:

- Test the main choices made in the 2020-2021 study: distribution criteria, reduction trajectory, emission calculation methods, etc.
- Highlight possible obstacles and potential levers related to lifestyles and travel organization, especially in terms of distances between home and work, with the following research question: could rationing (indirectly) be a lever for the reorganization of territory and work?
- Communicate, raise awareness about this measure and promote its adoption among inhabitants and elected officials

This experimental project should meet the following criteria:

- be deployable in the short to medium term, according to society’s current structural conditions (economic, territorial, social...)
- contain the means to be adapted to the various relevant scales in the experiment’s target area (from the standpoint of finances, techniques, skills and human resources)

It is not expected that the experiment will actually be implemented within the framework of this project.

**Methodology**

**First stage: identify the territory**

- Determine the relevant geographical, demographic and institutional scale on which to conduct the experiment (region, intercommunality, urban transport perimeter, etc.)
- Examine the advantages and limits of different territories in order to compare and select the one that will best allow for the experiment’s design and application (in terms of data, flows, travel practices...).

**Second stage: design the experiment**

- The group will further develop the details of the experiment’s implementation: calculating the carbon budgets, accounting/control system,...
- The group will propose a complete and coherent conception of the project: planning, communication, support, skills and technical development needs, legal aspects, budget, evaluation methods, etc...

**Expected results**

This project will lead to a comprehensive, ready-to-use synthesis for elected officials in the targeted territory, describing the steps required to implement a local carbon rationing experiment for trips made by inhabitants in their territory.
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Notes


Associated Thematics :

- Lifestyles
  - Diversity of lifestyles
- Policies
  - Reducing inequalities
  - Ecological transition
  - Cities & Territories

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