

## Using the circular economy to achieve carbon-free mobility

"The Role of the Circular Economy in Road Transport to Mitigate Climate Change and Reduce Resource Depletion" is an article published on 21 July 2022 in the journal *Sustainability* and written by Victor H.S De Abreu et al. Based on a qualitative review of the literature, the article identifies 46 best circular practices applied to the road transport sector, taking into account their potential to reduce greenhouse gas emissions and resource depletion.

**#1** Road transport accounts for most greenhouse gas (GHG) emissions from transport, representing 76% of the oil consumed by the sector worldwide. The circular economy (CE), seen here as an alternative model to the linear economy (take, make, throw away), is presented as a relevant way to limit the negative impacts of road transport on the climate and the environment. It refers to an economic system that promotes a closed-loop production-consumption model through sustainable product life cycle management.

**#2** The paper proposes to optimise waste and emission management in the global road transport sector by identifying 46 CE practices divided into twelve stages. These stages encompass all the processes in a vehicle's life cycle from production, distribution, use and maintenance through to end-of-life management, applying the principles of Reduce, Repair, Redistribute, Reuse and Recycle (developed as the '7Rs' in the article). For example, the "Raw Materials" and "Reduce" stages can be optimised by favouring the use of secondary raw materials taken from end-of-life vehicles (ELVs), while the "Manufacture" stage could prioritise the use of lightweight materials.

**#3** Once the vehicles are produced, the "Use and Consumption" stage can be optimised by, for example, reducing traffic volumes or sharing vehicles. The "Collection" and "Recycling" stages can be improved by developing a regional network of ELV processing centres. The final stage of "Disposal and treatment" could be facilitated by strict regulation of the components and by energy recovery. All in all, the measures identified here for road transport provide an understanding of the sector's emissions in all their complexity, and could thus guide decision-makers in developing comprehensive climate policies.

### Situation in France

There are CE-related road transport policies in France. Examples include the development of car-sharing and car-pooling services; incentives for electrical retrofitting, the possibility of using CE spare parts in repair or maintenance; and the extended producer responsibility (EPR) scheme for ELVs, which should lead to better collection, management and treatment. While these measures are important, they remain disparate, without an overall framework for the sector in terms of specific CE objectives or an analysis of the entire life cycle. Moreover, they are not coordinated with non-circular measures to reduce GHG emissions from mobility.

### The opinion of Pauline Bureau, the Vice-Chair of LFE

*The inadequacy of climate action to meet international commitments means that other tools must be considered to reduce the impacts of emitting sectors. While it is no substitute for the real need to reduce consumption, CE is nevertheless a very promising strategy.*