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Title of the presentation

Implications of uncertainty for transport policy for carbon dioxide

Abstract (400-500 words)

Transport policy is aware of the carbon issue when considering environmental impacts and sustainable mobility. This is a world problem: in Europe, transport modes account for about 30% of the production of greenhouse gases (GHG) figures are not substantially different in North America and Asia. The source of these figures are emission inventories. Like any other measurement they are subject to some uncertainty. Uncertainties can be generated by measuring instruments, nature of the item, external environment and other sources. Uncertainties in emission inventories are ascribed at different stages of the estimation procedure: conceptualization, models, input data and assumptions concerning Emission Factors and Activity Data. GHG estimates consistent with good practice are those in which uncertainties are reduced as far as is practicable. Therefore, it is necessary to measure the uncertainty of the estimates and how it influences, sums up, balances with the actual use that it is done of it.

From emission inventories, we consider for road transport both national estimates eventually disaggregated at provincial level and regional estimates in order to compare the results and the way the different approaches (top-down Vs. regional scale) affect data and their uncertainties. Estimates are based on the COmputer Program to calculate Emissions from Road Transport model. In the second part of our work the GHG road transport estimates and their uncertainties are considered as part of the database necessary for building the environmental targets of mobility plans. As indicated in the EU Guidelines on developing and implementing a Sustainable Urban Mobility Plan (SUMP), the step 3 of the plan is about the analysis of the current situation and the development of scenarios: it is a crucial analysis since it helps define appropriate policies and provides the necessary baseline against which progress can be measured. Climate protection stands among the problems and opportunities.

This paper identifies the main uncertainty sources focusing on GHG emissions from road transport. Although some sources of uncertainty are more easily measured than others, they may not be those most easily reduced, as uncertainty generally consists of two components — accuracy and precision. Our analysis attempts to measure the former, indicating how to take these issues into account and the future needs of carbon policy. In our application the weight of estimates' uncertainty is assessed against the use that is done of inventories in setting and measuring problems and priorities linked to environmental issues that SUMP aims at targeting.