

# Compliance and Emission Trading Rules for Uncertain Estimates of Inventory Uncertainty

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## **Abstract**

National inventories of greenhouse gases emissions are computed with rather low precision. Their uncertainty estimates are, however, calculated in a similar way and, therefore, have similar low precision. This should be accounted for in the compliance and trading rules. In this paper we model the uncertain inventories using fuzzy numbers, which allows us to shape both their uncertainties and ignorance of precise uncertainty parameters. Derived this way compliance and emission trading rules generalize those for the interval uncertainty approach, which were considered in the earlier papers. The final conclusion is, however, that the interval uncertainty rules can be still applied, but the noncompliance risk used in them should take much higher values.

## **Key words:**

national inventories of greenhouse gases emission, uncertainty, compliance, emission permit trading