

**Abstract Title:** *Climatological influences on inland waterway transport capacity*

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**Abstract:**

Climate change may affect inland waterway transport through disturbances in waterway hydrology: longer periods with strong water swells and drops. To allow fully loaded barges, the water level must be neither too high (limited air draught) nor too low (limited draught). Therefore, the water level impacts the load factor of barges and thus the transportation costs. Moreover, in winter, ice jams can paralyze inland waterway traffic on the river. In this paper, the effect of various climatological changes on the capacity of inland waterway in terms of barge transport is examined. The paper focusses on the development of a methodology for assessing the sensitivity of inland waterway systems to climatological changes and takes into account an experts' opinion survey that provides insight into the perceived likelihood of the different scenarios that are investigated. The analysis focusses on the inland waterway systems in Belgium, which has the second highest density of European inland waterways. It enables the integration of inland waterway transport in the intermodal supply chain. The results are related to investment planning and management in inland waterways transport. They are intended to be interesting to researchers and to inland waterways actors developing intermodal transport as well.

**Keywords:**

inland waterway transport, capacity, climate