

Spatial analysis connects excess water pollution discharge, industrial production, and consumption at the sectoral level

Topic: Input-Output Analysis: Sustainable Production and Consumption Policies - IV

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Linking of consumption-industrial production-surface water deterioration is essential for industrialised economies to understand the mechanism of industrial water pollution. However, such a connection may mislead policy decisions if sectoral details are lacking. This study investigated excess pollution discharge from 11,094 industrial enterprises comprising 22 economic sectors through setting discharge thresholds on 1,338 water function zones in Jiangsu Province, the most industrialised province in China. We further evaluated the contribution of final consumption in Chinese provinces to excess pollution discharge in Jiangsu via a national multi-region input-output table. Notably, despite typically heavy polluting sectors contributing the maximum excess pollution discharge, high-tech manufacturing sectors had a higher level of risk for excess pollution discharge. This was attributed to the spatial agglomeration of these sectors, with enterprises typically located in industrial parks. The increasing final consumption of specific sectors in both Jiangsu and other provinces may further drive excess pollution discharge in Jiangsu.