

# The political ecology of manure export in Lower Saxony: an ethnographic case study

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## Abstract

The “Oldenburger Münsterland” region in the German State of Lower Saxony is characterized by highly intensive animal farming. In order to maintain stock levels under tighter fertilizer regulations, the industry seeks to expand the established practice of manure transport into other regions. Drawing on ethnographic research and a political ecology framework, the contribution unfolds the complexity of this sociotechnical network. It looks at the material and social dimensions involved in the contentious process of slurry “becoming” fertilizer elsewhere, and at the infrastructuring practices related to the establishment of a circular economy for nutrients.

Keywords: infrastructuring, manure transport, political ecology, Science and Technology Studies (STS), sociomaterial practices

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## 1. Background

Since 2016, Germany has been facing infringement procedures over the inadequate implementation of the EU Nitrates Directive (91/676/EEC). In response, the German Fertilizer Ordinance has been revised in 2017, introducing measures such as fertilizer demand planning and limits on organic nitrogen application, including further restrictions for polluted areas administered by the Länder. The EC considers these as still insufficient and opened a second case in 2019. Further restrictions are imminent.

## 2. Case study

The “Oldenburger Münsterland”, a small area in the state of Lower Saxony is a center of highly intensive livestock production and related industries (Windhorst, 2004). Already before the 2017 Fertilizer Ordinance, about 3 Mio tons of manure were transported out of the region (Landwirtschaftskammer Niedersachsen, 2018). In order to maintain stock levels under tighter fertilizer regulations, the industry currently seeks to expand this established practice of manure transport quantitatively and geographically.

Meanwhile, intensified manure transport and processing across regions have been envisaged also on the federal level (Bundesministerium für Ernährung und Landwirtschaft 2019).

## 3. Findings

The contribution applies a political ecology lens to analyze manure transport and processing as a sociomaterial practice, involving a complex set of actors including slurry banks and logistics companies. Building on ethnographic research in Lower Saxony, it unfolds the complexity of manure transport as a sociotechnical network by

a) entangling the “ontological politics” (Mol 2002) behind conflicting definitions of what manure is, what it contains, and how it can be transformed into fertilizer in material and social terms; and

b) looking at the infrastructuring practices related to the establishment of a circular economy for nutrients; arguing that in practice the desire to upscale manure export is contrasted with local resistance against centralized processing, and the emergence of small-scale solutions built upon direct exchange relationships.

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