

## **56 – How to Govern Plastics Effectively by Economic Policy Instruments - the Example of the Ubiquitous Plastic Pollution of Soils**

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Plastic pollution in soils poses a major threat to soil health and soil fertility that are both directly linked to food security and human health. In contrast to marine plastic pollution, this ubiquitous problem is thus far scientifically poorly understood and policy approaches that tackle plastic pollution in soils comprehensively do not exist.

In the presentation, the effectiveness of existing policy instruments to avoid harmful plastic pollution in agricultural soils against the background of international environmental agreements, in particular the Paris Agreement and the Convention of Biological Diversity, is assessed. A focus will be set on environmental and fertilizer legislation relevant to soil protection in the European Union and in Germany. It will be shown that command-and-control provisions exhibit various regulatory weaknesses and are unable to address the continuous plastic pollution at source. In fact, the mere improvement of detailed provisions in command-and-control law is insufficient in this respect, as the plastic pollution ecologically is also a problem of quantity. Instead, the existing governance gaps are more effectively addressed through economic policy instruments. In this respect it will be discussed to what extent comprehensive quantity-control instruments to phase out fossil fuels worldwide and in all sectors as required by climate protection law can also be effective approaches to tackle plastic pollution in environmental media like agricultural soils.

It is concluded, that the major global challenge lies in the quantitative reduction of plastic inputs at its source, which is closely linked to the necessary transformation to a post-fossil society. Provided that respective economic policy to phase-out fossil fuels is implemented on a broad geographical scale, it will be shown that a new separate anchoring of plastics in international law does not appear to be absolutely necessary.

### **Biographical note**

Jessica Stubenrauch (PhD, Dipl. Finw. Dipl. Geogr.) holds a PhD in agricultural science. As a member of the Research Unit Sustainability and Climate Policy in Leipzig and the University of Rostock she is a post-doc researcher in the project InnoSoilPhos (Innovative solutions to sustainable Soil Phosphorus management). Her main focus within transformative governance research is on sustainable land use, which combines efficient agricultural production with the protection of natural resources. In her dissertation she investigated challenges of sustainable land use, closed nutrient cycles and interlinked resource protection from a cross-national perspective. Apart from that, she is involved in a policy consulting project on governance research on plastics and on geoengineering.