Improving Risk Governance of Emerging Technologies through Public Engagement: The Neglected Case of Nano-Remediation?

While public engagement is internationally considered to be crucial for successful governance of nanotechnologies (NT), it has not necessarily been clear what the relationship is (or should be) between these engagement efforts and the more traditional governance practice of scientific risk assessment. This paper therefore carries out a literature review to capture and analyse how governance strategies have focused on public engagement for NT and how such engagement relates to processes of risk analysis. To further investigate these issues, we focus on a specific NT application as a case study: the use of nanoparticles for environmental remediation (nano-remediation). Through our review and analysis we find that the main approaches to incorporating public engagement into governance strategies have been the generation of a better understanding of public perceptions of NT and the setting of general research priorities. In the case of nano-remediation, we find that public engagement efforts have been extremely limited, even though this technology has been used in the field in several countries and highlighted as potentially problematic by others. Finally, we provide recommendations for improving the links between public engagement and risk assessment and specifically call for more work on the case of nano-remediation.