

The Role of Trust and Conflicts of Values for Public Protest Potential

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Public protests have recently proven to be a substantial barrier for CCS deployment. Particularly in Europe, they cause significant delays or even abandonment of CCS projects. In the present study, we used structural equation modeling to examine an extensive causal model explaining the public's protest potential against CCS. By studying public protest potential instead of acceptance, we believe we obtained higher external validity of our research, as recent developments (e.g., the Barendrecht project) suggest that active protests rather than passive low levels of acceptance slow down CCS deployment. We analyzed the influences of trust on public protest potential via perception of risks and benefits in the model. Additionally, we included three values regarding the potential human interference with natural structures in the deep subsurface, the reduction of emissions as well as the decentralization of energy production. The data obtained from a mail survey among a representative sample in Switzerland ($N = 769$) fitted our model sufficiently ($CFI = .94$, $RMSEA = .054$). Perceived benefits were more prominent for public protest potential than perceived risks. However, perceived benefits did not dominate the impact of perceived risks as much, as earlier studies found for acceptance of CCS. We conclude that the role of risk perception for active protests should not be underestimated in risk management. Trust in energy companies did not play an important role and exerted a barely significant (indirect) influence on public protest potential. In contrast to trust, the three examined values had a strong impact on protest potential via the perception of risks and benefits. The value regarding the decentralization of the energy system had a negative influence on perceived benefits and a positive one on perceived risks. Values regarding emission reduction and potential human interference with natural structures in the deep subsurface showed a high positive correlation. The impact of these values on risk and benefit perception were, however, converse. This result reveals the intuitive conflict of values that laypeople face in their decision-making about CCS. At first glance, our results for trust seem to contradict earlier experimental research,

how manipulating participants' levels of trust in stakeholders can influence the participants' acceptance of CCS. We provided laypeople with information about CCS technology before presenting the questionnaire, but not with information about the positioning of different organizations. When our participants were asked to decide about their acceptance of CCS, they may, given their own conflict of values, have been unsure what type of organization (e.g., Vattenfall or World Wide Fund For Nature [WWF]) is advocating the deployment of CCS. Consequently, the participants' trust in one of these organizations may not be of use in their decision-making. Even if awareness of CCS among the general public was high, the positions of some important stakeholders regarding CCS deployment may still not be evident to the general public because these positions are yet either ambivalent (e.g., WWF) or not actively communicated. We conclude that trust can become fully effective as a determinant of public acceptance of CCS only when the lay public perceives distinct positioning of the involved stakeholders. Until then, laypeople are likely to draw on their own value system and intuitive mental concepts for making decisions about accepting CCS or protesting against it.