Ecological risk assessment (ERA) is fundamental to genetically modified organism (GMO) decision making, yet there exist competing ideas and approaches concerning how GMO ERA should be conducted. The differences among competing approaches are important to understand because of their potential influence on GMO decision making. Specifically, these differences may influence how harm is defined, how uncertainty is addressed, and ultimately, what informs GMO decision making. The social science fields of science and technology policy and science and technology studies provide insights to help study these conflicts and their implications. Drawing upon this work, I examine a GMO ERA conflict that involves competing approaches for assessing the impacts of genetically modified plants on non-target organisms. In this study I ask: How is harm defined in the competing approaches? How do the individuals involved understand the conflict? What are the implications for GMO biosafety and decision making?

I employ document analysis to study the conflicting GMO ERA methodologies and scientific studies, and I use in-depth interviews with the scientists involved in the conflict to further comprehend the crucial points of the dispute. Setting aside the limiting focus on which side is most legitimate, my analysis examines the assumptions and understandings that inform each approach. In particular, I highlight the assumptions and understandings that influence the divergent conceptions of how to conduct GMO ERA and the implications for GMO policy. I hope to clarify areas of agreement and the origins of differentiation within the dispute, while opening key conflicting assumptions to further discussion. This research will help establish a framework to understand and make more productive current and future GMO ERA conflicts.

Keywords: ecological risk assessment, conflict, non-target effects, policy