

Project Abstract: NSF Program Ethics & Values in Science, Engineering & Technology
MANAGING RISK IN THE PUBLIC INTEREST: HOW ETHICS AND VALUES SHAPE BIOLOGICAL
CONTROL PRACTICE AND POLICY
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Values conflicts at the boundaries of ecological science create problems for environmental policy regulation. A scientific community must come to some form of consensus on the character of the risk and the responsibilities of practitioners before government agencies can provide effective regulation. The case of classical biological control with imported arthropods provides a robust opportunity to investigate the role that social values and applied professional ethics play in the management of ecological risk, because practitioners, critics and regulatory scientists all claim to be acting in the public interest. The discovery of some nontarget effects of arthropod biological control has led some ecologists to assert that biological control is inherently risky, unacceptably so. Most science, technology & society (STS) studies of risk management have confronted the faultline of private vs. public interest, frustrating the exposition of how hybrid communities (science practitioners and regulators) frame the public interest. This study moves beyond the public versus private tension to illuminate how scientists understand the public interest and the best way to protect it from risk. It adapts Jasanoff's methodology of comparing national styles of regulation and discourse so as to investigate how hybrid communities incorporate new ethical concerns into their practice. New Zealand and South Africa now have the most sophisticated regulatory procedures both to manage the risks of biocontrol importations and to facilitate public participation in decision making. In contrast, the US has no dedicated, comprehensive regulatory framework for biocontrol.

Methodologically, this present study integrates the anthropology of biological pest control practitioners and their institutions, content analysis of the ethics and values discourses of biological control, and an examination of the mutual influence of professional ethics and biocontrol regulation. It will examine the following research questions: 1) How do hybrid communities use ethics and values to frame the public interest? 2) How does public input contribute to the resolution of controversies in these scientific communities? 3) How does public participation shape the biocontrol practice and policy?

The intellectual merit of this study emerges from its examination of a hybrid scientific community to determine how actors have been shaped by the social, scientific and political institutions in their countries, and how they have in turn framed their understanding of risk and public interest in policy, two critical issues in STS. It will interpret risk management controversies clouding biological control by interpreting them through the lens of social values and applied professional ethics, tracing their impact from training through practice, regulation and policy. It will remedy the dearth of studies of hybrid scientific communities in the STS field.

This study will have broad impacts because its comparative analysis will speak to a range of environmental controversies that cannot be resolved by ecological science alone. It will expand upon previous STS work investigating how values shape the perception and management of ecological risk, focusing on the role of the public interest and public participation in this. The comparative analysis of the role of ethics and values in public engagement will speak to two overarching, cross-cutting in applied ecology: the risk management associated with invasive species, and with the regulation of transgenic organism releases.