



PUBLICATION FACTS

JOURNAL

CONSERVATION BIOLOGY

PUBLICATION DATE

2019

VOLUME/ISSUE

33 (2)

PAGES

275-287

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OPPORTUNITIES FOR BETTER USE OF COLLECTIVE ACTION THEORY IN RESEARCH AND GOVERNANCE FOR INVASIVE SPECIES MANAGEMENT

ABSTRACT

Controlling invasive species presents a public-good dilemma. Although environmental, social, and economic benefits of control accrue to society, costs are borne by only a few individuals and organizations. For decades, policy makers have used incentives and sanctions to encourage or coerce individual actors to contribute to the public good, with limited success. Diverse, subnational efforts to collectively manage invasive plants, insects, and animals provide effective alternatives to traditional command-and-control approaches. Despite this work, there has been little systematic evaluation of collective efforts to determine whether there are consistent principles underpinning success. We reviewed 32 studies to identify the extent to which collective-action theories from related agricultural and environmental fields explain collaborative invasive species management approaches; describe and differentiate emergent invasive species collective-action efforts; and provide guidance on how to enable more collaborative approaches to invasive species management. We identified 4 types of collective action aimed at invasive species-externally led, community led, comanaged, and organizational coalitions-that provide blueprints for future invasive species management. Existing collective-action theories could explain the importance attributed to developing shared knowledge of the social-ecological system and the need for social capital. Yet, collection action on invasive species requires different types of

monitoring, sanctions, and boundary definitions. We argue that future government policies can benefit from establishing flexible boundaries that encourage social learning and enable colocated individuals and organizations to identify common goals, pool resources, and coordinate efforts.

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