Land Use Policy 61 (2017) 353–367

Contents lists available at ScienceDirect

Land Use Policy

journal homepage: www.elsevier.com/locate/landusepol

The influence of social criteria in mobilizing watershed conservation efforts: A case study of a successful watershed in the Midwestern U.S

Sarah P. Church*, Linda Stalker Prokopy

Purdue University, Department of Forestry and Natural Resources, 195 Marsteller Street, West Lafayette, IN 47907, USA

ARTICLE INFO

Article history:
Received 26 April 2016
Received in revised form
18 November 2016
Accepted 19 November 2016
Available online 5 December 2016

Keywords:
Watershed planning
Non-point source pollution
Agriculture
Collective action
Social dimensions
Catalyst event

ABSTRACT

It has been argued that certain baseline conditions and social preconditions present in a watershed's community can influence a project's likelihood of collective action and farmer adoption of conservation practices. However, it is unclear exactly how these conditions interact with catalyst events to lead to successful collective outcomes. In this paper, we build upon previous research describing the role of catalyst events in leading to collective action, as well as research that proposes specific baseline social indicators to consider when siting watershed conservation projects. We contextualize the impetus for a successful watershed project and identify new social indicators that were mobilized for project success through a qualitative case study; the Indian Creek, Illinois watershed project. We illustrate that baseline conditions and social preconditions were key to project success and contend that these conditions mobilized the watershed community toward collective action after being faced with an intentional catalyst event. While baseline social conditions were key to the project's success, we found that how the project was structured and managed was also very important. Additionally, baseline conditions changed as a result of the project. This study provides an understanding of the mechanisms contributing to project success and is applicable to practitioners in selecting watersheds for future conservation projects and in determining how to structure and manage a watershed-based project.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Despite decades of effort to reduce the impact of agricultural nonpoint source pollution runoff into waterbodies across the United States, water problems continue to persist (EPA, 2003; Dubrovsky and Hamilton, 2010; Wiebe and Gollehon, 2006). The implementation of voluntary, cost-share conservation projects (e.g., buffer strips, filter strips, terracing, nutrient management planning) is a dominant approach to non-point source pollution mitigation and improvement of impaired waters in much of the United States (Reimer and Prokopy, 2014). Funding is allocated through the United States Farm Bill to the United States Department of Agriculture Natural Resources Conservation Service to provide technical and financial assistance to farmers through programs such as the Conservation Stewardship Program (CSP) and Environmental Quality Incentives Program (EQIP) (see http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/). These programs incentivize farmers to incorporate conservation projects and systems into their farm management practices in order to reduce nutrient loss, improve soil health (Edwards et al., 2015; IL EPA, 2015; Rejesus and Hornbaker, 1999; Tomer and Locke, 2011), and in turn, improve farm sustainability and downstream water quality. Farm Bill funding is generally allocated to watersheds according to ecological measures such as the impaired status of a stream or river, designated by the U.S. Environmental Protection Agency (EPA) through the Clean Water Act (Gilbert et al., 2013; EPA, 2011). Time and again, resources have been allocated to watersheds, yet water quality problems continue (EPA, 2009; Ribaudo, 2015). Along with others, we suggest that determining watershed selection based only on ecological conditions may not be an effective approach to overall watershed management and health (Norton et al., 2009).

Much has been written about farmers' *individual* motivations to implement conservation farming practices including access to financial incentives and a profit motivation (Lichtenberg, 2004; Moon and Cocklin, 2011; Thompson et al., 2015), sense of place (Mullendore et al., 2015), desire for on-farm improvements such as increased soil health (Reimer and Prokopy, 2014), a farmer's sense of being a land steward (Rosenberg and Margerum, 2008; Reimer et al., 2012; Ryan et al., 2003), and interest in benefits seen off the farm such as improved water quality (Czap et al., 2012; Reimer and Prokopy, 2014; Reimer et al., 2012). Individual motivations are important aspects of conservation uptake and participation in collective action and may feed into the success of watershed-scale

* Corresponding author.
E-mail addresses: church9@purdue.edu (S.P. Church), lprokopy@purdue.edu (L.S. Prokopy).

http://dx.doi.org/10.1016/j.landusepol.2016.11.030
0264-8377/© 2016 Elsevier Ltd. All rights reserved.

Fig. 1. From Prokopy et al. (2014): Relationship between baseline conditions, a catalyst event, and a collective response.

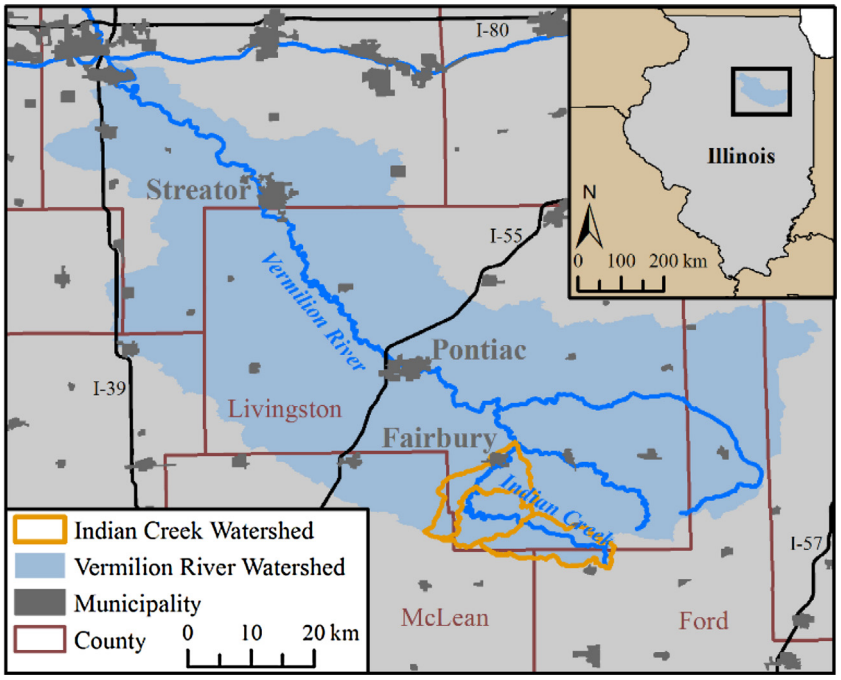

Fig. 2. Context of the Indian Creek and Vermilion River watershed.
Sources: IL SGS, 2003, TIGER, 2015, US Census, 2000, USDA-NRCS n.d., USGS, 2016

conservation projects which is the focus of this paper. Much that is written on successful watershed management points to collaborative approaches and acknowledges the importance of human dimensions in improving watershed health (Floress et al., 2011, 2015; Morton and Brown, 2010; Sabatier et al., 2005; Thurston et al., 2012). For example, collaborative watershed planning processes that engage a diversity of stakeholder groups are a popular approach to water resource management that have seen some success in the development of watershed plans toward increased environmental quality (Hardy and Koontz, 2008; Margerum, 2008). Also important to improved watershed health are the behaviors of the people who live and work within a watershed. Human actions affect natural resource landscapes such as watersheds, and thus the perspectives of the people with both an impact and a stake in water resources should be incorporated into watershed projects and planning (Floress et al., 2015; Thurston et al., 2012). Certain baseline conditions and social preconditions present in a watershed's community, including catalyst events, can influence a project's likelihood of collective action and farmer uptake of conservation practices (Babin et al., 2016; Prokopy et al., 2014).

Prokopy et al. (2014) argue that catalyst events that raise awareness of water quality issues that have caused, or may cause, harm can trigger collective action. They further contend that baseline conditions in the watershed community can influence whether that community collectively responds to a catalyst event. In this paper, we use Prokopy et al.'s (2014) concept of "catalyst event" to mean a major stressor or a series of occurrences that have the potential to lead to change or collective action through interactions with existing contextual conditions. We use Meinzen-Dick's (2004) conceptualization of collective action to mean a group of people with a shared interest who are taking part in a common action. Fig. 1, from Prokopy et al. (2014), shows a posited relationship between community baseline conditions (e.g., problem salience and community leaders), a catalyst event (e.g., availability of new funding), and a potential collective response (e.g., formation of a watershed group). As illustrated in the model, social conditions are present in a watershed community whether or not there is a collective response to a catalyst event. However, the model does not elucidate on which social conditions may influence collective response or project success. Thus we use Babin et al.'s (2016) work to identify baseline social conditions that may contribute to action toward watershed improvement. Babin et al. argue that baseline conditions that can lead to successful watershed outcomes include: 1) Biophysical impairment, 2) Federal/state/local funding programs, 3) Historical cost-share programs, 4) Funded watershed group with current paid staff, 5) Existing watershed plan or assessment, 6) Adoption and re-enrollment rates of best management practices (BMPs), 7) Problem salience, 8) Collaboration and trust between agencies, 9) Stakeholder commitment/project interest, 10) Farmers as conservation leaders, and 11) Supportive farm, sportsmen and wildlife organizations.

Prokopy et al.'s (2014) research on the influence of catalyst events on collective action ends with a call for watershed case studies that ". . .fully delineate the context, the catalyst event, and the types of actions that followed" (p. 12) in order to begin to understand interactions between catalyst events, baseline social

Download English Version:

https://daneshyari.com/en/article/6461326

Download Persian Version:

https://daneshyari.com/article/6461326

Daneshyari.com