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Learning about fishery management: Evaluation of a contextualized responsive evaluation approach

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ABSTRACT

This article discusses the extent to which a responsive evaluation (RE) approach contributed to learning by stakeholders in a case of high complexity. Fishery management in Grand-Popo, Benin is characterized by ambiguity, that is contrasting views among fishery stakeholders about what should be done, why, how, where, and when to resolve fishery problems like the depletion of fish-stock and absence of income alternatives. It was also characterized by great gaps (mismatches) between interventionists' plans and actions, despite generations of interventions and evaluations of their effectiveness. The RE approach aimed at facilitating interactions between interventionists and fishing people to stimulate learning and hence reduce the ambiguity and mismatches. In this article, we take distance and evaluate the results of this action research approach. We found that in the interaction some learning indeed occurred. The fishing people learned among others that intervention resources are limited and that they should organize themselves to lobby for and monitor interventions to solve their problems. Interventionists learned that they could share knowledge about their roles and limited resources with fishing people so that the latter could lobby for more resources. Fishing people however, did not learn to adopt more sustainable fishing practices. Also, interventionists did not learn to influence politicians and financial partners themselves for sufficient resources. Both categories of stakeholders developed ideas for how to collaborate to improve fishery management. We conclude that although some single-loop, double-loop and social learning occurred, the learning was limited and reflect on the related challenges for RE in natural resource management.

1. Introduction

Facilitating sustainable natural resource management (NRM) in developing countries remains a challenge (OECD, 2002; UNEP, 2011; United Nations, 2002, 2012; WCED, 1987). It is a challenge not because of a lack of initiatives, but because of the questionability of the initiatives that are undertaken to solve the diagnosed problems and a lack of knowledge about the mechanisms that explain the persistency of problems. Among the diagnosed causes of unsustainable NRM interventions are the lack of participation of resource dependants in intervention processes and the linear planning presuming clear intervention–effect relationships (Baland & Platteau, 1996; Dangbégnon, 1998; Holling, 1978; Stankey, Clark, & Bormann, 2005). These diagnoses led scientists and practitioners to suggest integrative and adaptive management approaches to NRM. Cap-net, GWP, and UNDP (2005) for instance suggest integrated water resource management – a process designed to promote the co-ordinated development and management of water, land, and related resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems. Holling (1978) proposes adaptive environmental management; an interactive process engaging managers, scientists, resource users, and other concerned stakeholders which makes use of techniques to reduce, and benefit from environmental changes in order to develop more resilient policies. Put more simply, adaptive management is an approach in which management experiences are considered as sources of learning by managers and scientists, as well as other management stakeholders, which should lead to adaptations in the management approach (Halbert, 1993; Stankey et al., 2005; Walters, 1997). Some evidence suggests that integrated and adaptive management has contributed to the design and enforcement of fishing rules (Jentoff & McCay, 1995; Lee, 1998; McLain & Lee, 1996). This is the case for instance in

Abbreviations: NRM, natural resource management; RE, responsive evaluation.

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Norway, Denmark, and Spain, where fishermen's organizations and the government cooperate in the design and enforcement of fishing quotas and other rules (Jentoff & McCay, 1995). In the United States and Australia, Ladson and Argent (2002) and Mapstone (2003) report on various degrees of success in the application of the adaptive management approach to rivers and fisheries management. However, they also note many problems with the adaptive management approach, such as a failure to understand the resource system, non-relevant problem definitions, lack of participation of important stakeholders, a complex web of values, and institutional complexity. In general, complexity and uncertainty in NRM are perceived as the diversity, interconnections, and dynamics of and among factors and actors connected to NRM (Baland & Platteau, 1996; Giller et al., 2008; Williams & Imam, 2006). In conclusion, the effective implementation of integrative and adaptive management approaches could generate successes, but faces challenges due to complexity and uncertainty (Lee, 1998).

In our view, gaps between what interventionists and the target groups of interventions say they (will) do and what they actually do contributes to complexity and uncertainty of NRM, among others because espoused theories in the form of plans may trigger high expectations among the beneficiaries that are not necessarily fulfilled. Effective NRM hence may well be dependent on explicit attention to match between action theories espoused and in-use (see Section 4.1 for an explanation of these concepts). To date, very few studies address this issue of (a lack of) congruency in action theories that are the assumptions underlying actions of NRM stakeholders. This article aims at filling this gap by evaluating an action research approach that was especially designed to foster correspondence in action theories by stimulating learning in the context of NRM.

The study reported in this article is one of the first about the use and results of responsive evaluation (RE) approach in the field of NRM. Hence, it provides insight into the potential and the challenges of RE to stimulate learning in complex contexts. Such accounts of the outcomes of an evaluation approach are rare in evaluation practices (Miller, 2010).

In the following, the action research approach will be presented shortly in relation to the specific case that is at the core of this article: fishery management in Grand-Popo (Section 2). Next, the RE approach used in the case to stimulate learning is presented (Section 3). The methodology to assess whether learning has taken place is described in Section 4. Section 5 reports the action theories espoused and in-use of the fishery stakeholders before the RE process in order to define the main mismatches. The changes occurring in the RE process with regard to these mismatches are discussed in Section 6. Section 7 analyses the changes in terms of learning after which possibilities to improve RE are suggested in line with plausible reasons for the limitations in learning discussed in Section 8.

2. Fishery management problems in Grand-Popo

Grand-Popo is a municipality in South-Western Benin, next to the Atlantic Ocean. It is a Ramsar site, i.e., a wetland of international importance composed of rivers (*Mono* and *Sazué*), the coastal area, lagoons (*Grand-Popo* and *Gbagan*), a channel (*Chenal Aho*), a delta (*Bouches du Roy*), some marshlands, and some plateaus (see Fig. 1). This municipality has more than forty thousand inhabitants living predominantly from fishing, supplemented with small-scale agriculture, animal husbandry, crafts, collection of diverse natural products like crab and raffia, and trade. In the lower valley of the Mono-River, floods and river erosion impair the livelihoods of many inhabitants (more than 50%) (Apretectra, 1995; Dagnon-Prince et al., 2004; Jul-Larsen, 1994). The flooding dates back to the seventeenth century (Pliya,

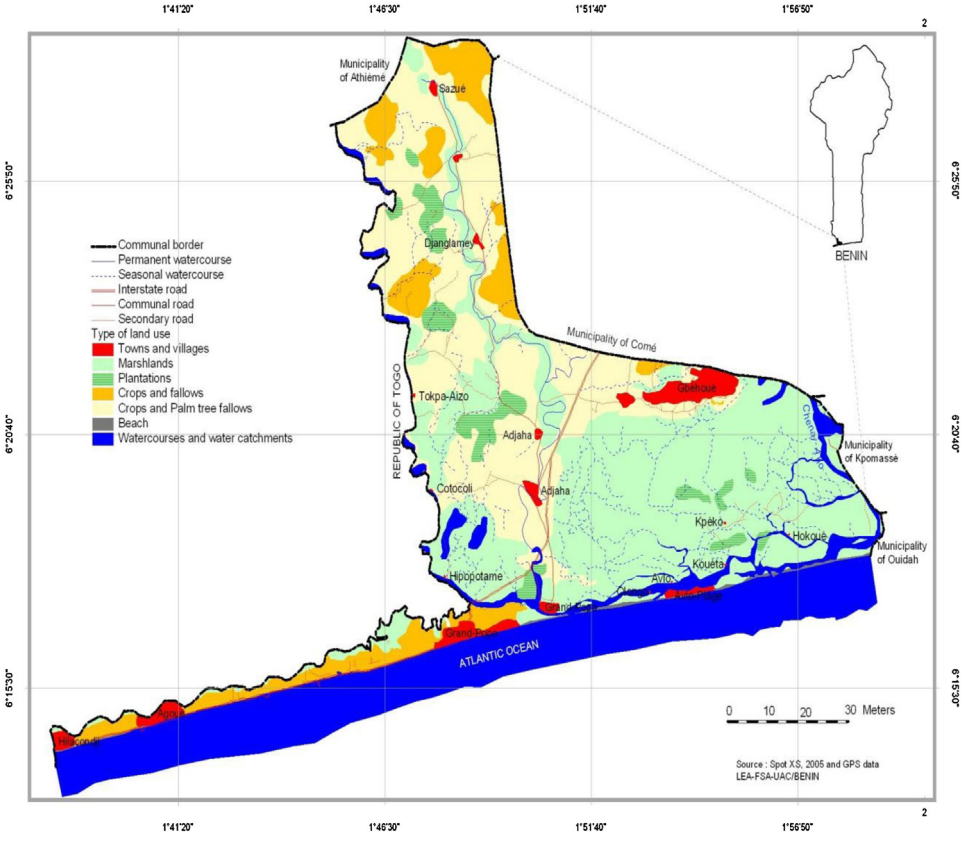

Fig. 1. Map of Grand-Popo.