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The design of a contextualized responsive evaluation framework for fishery management in Benin

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ABSTRACT

The main question addressed by this article is how to adapt the responsive evaluation (RE) approach to an intervention context characterized by repetition of ineffective interventions, ambiguous intervention action theories among stakeholders, and high complexity. The context is Grand-Popo, a fishing municipality located on Benin's southwest Atlantic coast. The fishery management interventionists and the fishing communities in the municipality all espoused concern for the sustainable improvement of fishing actors' livelihood conditions, but differed about the reasons for this livelihood impairment, and about what should be done, when, where, and by whom. Given this ambiguity, we identified RE as a promising action research approach to facilitate dialogue and mutual learning, and consequently to improve stakeholders' ability to resolve problems. However, this approach seems to have some shortcomings in the Grand-Popo context, regarding the repetitive ineffectiveness of interventions, high complexity, and uncertainty. Therefore, based on our empirical study, we add three dimensions to the existing RE framework: historical analysis to deal with routine interventions, exploration and discussion of incongruities of action theories to trigger double-loop learning, and system analysis to deal with complexity and uncertainty. This article does not intend to address the implications or impact of this adapted RE framework. Instead, we suggest some criteria and indicators for evaluating whether the proposed amended RE approach has assisted in resolving the fishery problems in Grand-Popo after the approach has been applied.

1. Introduction

Grand-Popo is a fishing municipality and a Ramsar site (Ramsar site 1017, i.e. a wetland of international importance) on the coast of south-western Benin (Ramsar, 2007; see Fig. 1). Since about the 1950s, fishing communities in this area have been experiencing fish stock depletion and degradation of their livelihoods, without being able to benefit from relevant interventions (Kouévi, Mierlo, & Leeuwis, 2011). Indeed, most of these communities live on islands and depend mainly on fishing for their income and food security. Others live beside rivers, marshlands, and the sea, and have alternative income-generating opportunities—often threatened, however, by floods, erosion, and limitations in trade opportunities (Appretectra, 1995; Dagnon-Prince et al., 2004).

Before the 1950s, these fishing communities had better fishing, trading, and living conditions because of the better respected fishing rules and because of a wharf dating back to colonial times that facilitated international trade from Benin (Association Nonvitcha, 1987; Interviews, 2007–2011; Pliya, 1980). Due to coastal erosion (before 1950), coastal erosion threats (to date), the relocation of the wharf and port activities to Cotonou (85 km from Grand-Popo) in the 1960s, the decolonization process, and the absence of strong institutions to make fishing rules respected, fishing activities started declining in Grand-Popo (Interviews, 2007–2011; Pliya, 1980). This decline in livelihood conditions has been exacerbated by unsustainable management practices like deforestation, pollution, and overfishing as well as the construction of the hydroelectric dam *Nangbéto* upstream in Togo, that have jointly been damaging the fishery ecosystem in Grand-Popo (Association Nonvitcha, 1987; Dagnon-Prince et al., 2004; Interviews, 2007–2011; MEHU, 2001; Ouali, 1995; Tomety et al., 2001). The water system is more and more silted up (with mud and sand)

Abbreviation: RE, Responsive evaluation.

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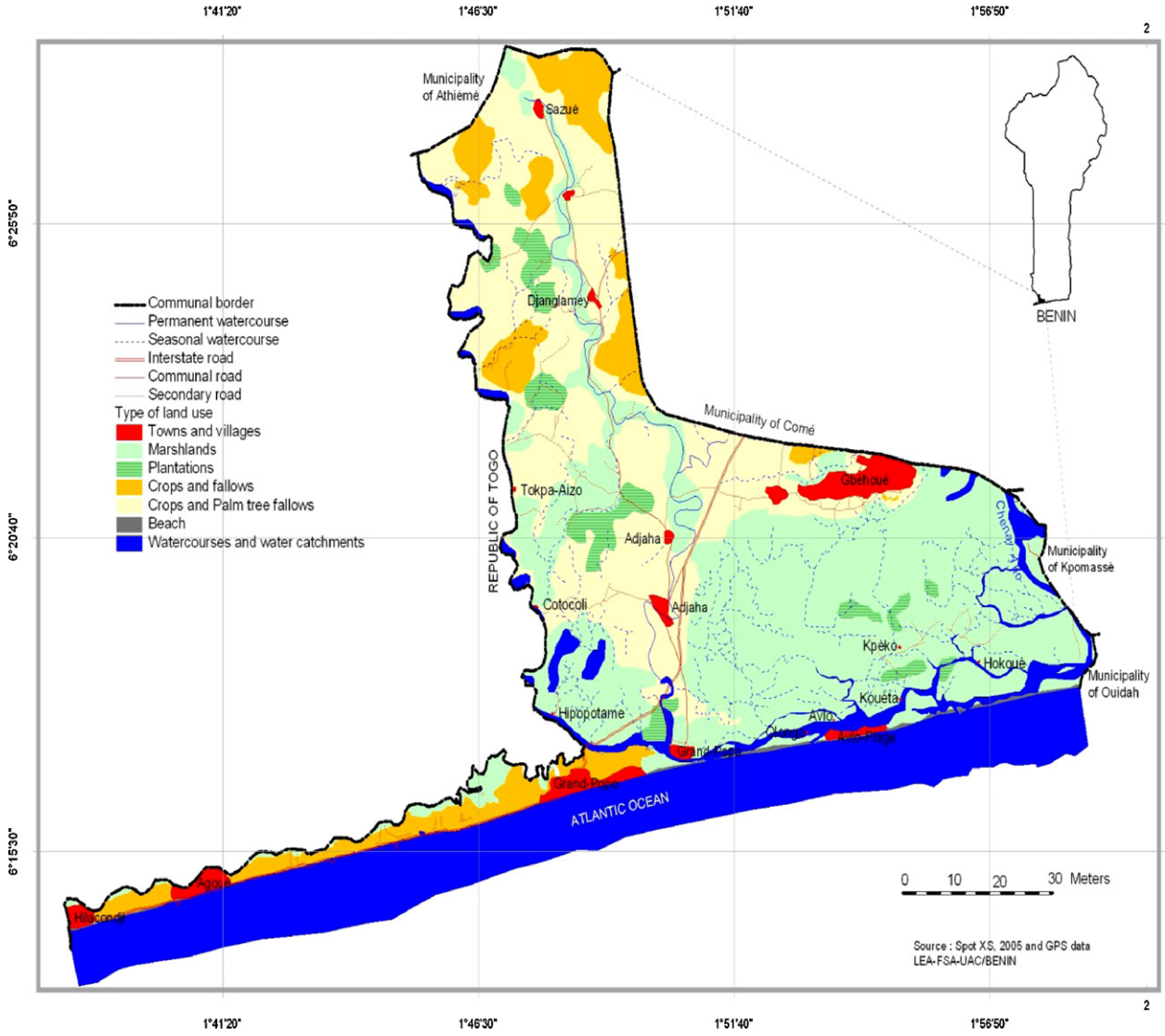

Fig. 1. Map of Grand-Popo.

because of pollution and erosion, and consequently the living and reproduction shelters of fish stocks are more and more restricted (Interviews and observations, 2007–2011). The diversity of fishery resources has been severely depleted. This diversity had previously been self-regulated by the continuum river–lagoon–sea (see Fig. 1) and is currently disturbed by siltation and floods (Association Nonvitcha, 1987; Interviews and observations, 2007–2011; Pliya, 1980). Indeed, because of the dam and the siltation of the river, the lagoon, and the delta, there is less and less salt in the lagoon, and brackish aquatic resources, for instance, have become rare (Interviews and observations, 2007–2011). In the words of one fisherman:

> *. . . There are two kinds of 'éhoué*[1]*': the one in the sky [i.e. the sun], and the one down below [i.e. the fishes]. Both should not see each other. As the water is silted, the fishes are getting more and more in contact with the sun, and therefore disappearing for other destinations . . .*
> *. . . While talking of fish, not all fish reproduce in water. There are some fish that reproduce in sea and migrate in water via the delta, like the 'Owétin' [mullet]. Fish that reproduce in water are 'Akpavi' [tilapia] and 'Edinhoué' [catfish] . . .*

To emphasize the importance of the brackish water for the existence of the fishing communities, one woman fish wholesaler and salt producer said:

> *. . . There is nothing in sweet water . . . It's 'Djessin' [brackish water] that sweetens our life . . .*

Interventions to reverse this fishery resource degradation and livelihood impairment have since the 1950s consisted mainly of the design and implementation of intervention policies for diversification of income sources and for sustainable fishery management practices (Interviews, 2007–2011; MPDEAP, MEF, & MAEP, 2007; PADMOC, 2001; PADPPA, 2004; PAMR, 1989; PDRIM, 1990). Earlier research has shown that these interventions have repeatedly had very little effect because of their failure to address the core causes of the fishery problems (Kouévi et al., 2011). Those causes relate, among other things, to the lack of respect of fishing and sustainable management rules and to a lack of alternative income sources for all fishery dependents. Kouévi et al. (2011) attributed the reasons for the repetition of the ineffective interventions to the repeated discrepancy between interventionists' espoused and in-use action theories despite generations of interventions, and to the absence of double-loop learning interactions among the fishery management stakeholders.

[1] *Ehoué* means both fish and sun in the local language Popo or *Xwla*.