

Chapter 20

NGO Participatory Approaches for Promoting Environmental Consciousness Among Subsistence Farmers in Ghana

Alexis Beyuo

 <https://orcid.org/0000-0001-6266-0491>

Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR), Ghana

ABSTRACT

Agriculture contributes a fifth of the greenhouse gas emissions on earth. To help reduce this large ecological footprint, there is the need for collaborative efforts aimed at increasing farmers' environmental consciousness. This chapter used the ladder of participation as a framework to assess how knowledge co-creation between local farmers in Ghana's Upper West Region and NGO agro-technocrats is associated with farmers' environmental consciousness. Using an exploratory sequential mixed method design, in-depth interviews and focus group discussions were conducted with NGO officers and beneficiary farmers. Probability sampling was then used to select 1,050 beneficiary farmers for interviews and analysed using descriptive statistics and logistic regressions. Results show that the use of robust categories of participation were associated with farmers' increased likelihood of adopting most of the environmentally conscious practices co-created. Conversely, less robust participatory approaches resulted in either a reduced likelihood of adoption or non-adoption among beneficiary farmers.

INTRODUCTION

The International Panel on Climate Change (IPCC) (2018) estimates that humanity is faced with the arduous task of achieving net zero global carbon dioxide emission by mid-century if the deleterious effects of climate change are to be averted. Efforts at achieving this net zero emission target will require improved environmental consciousness, a term that emphasises that humans are merely part of the complex web of life and therefore cannot lay any better claim to the earth than their co-inhabitants (Nazir &

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Pedretti, 2016). Accordingly, to ensure a sustainable co-existence with their fellow earthlings, humans should endeavour not to push the earth's carrying capacity beyond its limits. Increased environmental consciousness results in better ecosystem services (IPCC, 2019; 2018).

Estimates point to the agricultural sector as one of the biggest greenhouse gas emitters (Ba, 2016; Garnett, 2011; McMichael, Powles, Butler, & Uauy, 2007). Besides, many subsistence farmers in Developing Countries aspire to farm on large scale just as their counterparts in Developed Countries. This heightens the risk of a larger ecological footprint from the agricultural sector if the sector is to continue its business-as-usual production trajectory. Though subsistence farmers have not contributed substantially to the current climate change conundrum, it will be in their interest to help adapt to its consequences since postulations show that economically poor parts of the world, which are dominated by subsistence farmers, will likely bear the brunt of climate change (Afriyie, Ganle, & Santos, 2017; IPCC, 2014; Opare, 2016; Egbetokun et al, 2018; 2020). Indigenous subsistence farmers in the Upper West Region (UWR) do not only live on marginal lands, but also depend on the environment in spite of its increasing vagaries for their livelihood (Adam, Freeman, & Dassah, 2017; Kusakari et al., 2014). They therefore need to heighten their environmental consciousness so as to fully participate in climate change adaptation.

There is a preponderance of literature on climate change adaptation efforts. They include Kuchimachi, Nazareth, Bendapudi, Awasthi and D'Souza's (2019) study of adaptation strategies in Maharashtra, Mataya Vincent and Dougill's (2019) examination of adaptation efforts in Malawi, and Degefu, Assen, Satyal and Budds' (2019) assessment of the implications of villagization on pastoralists' adaptation drive in Middle Awash Valley of Ethiopia. Little is however known about how adaptation efforts can be influenced by the types of participatory approaches employed.

Studies extolling the importance of indigenous knowledge in the promotion of environmental consciousness also abound (e.g. Adom & Kquofi, 2016; Berkes & Usher, 2000; Bernard et al., 2019; Guthiga & Newsham, 2011; Nyong, Adesina, & Elasha, 2007; Opare, 2016; Veihe, 2000). These studies argue that indigenous farmers see themselves as an integral part of the ecosystem, which is needed for their very survival. As such, indigenous farmers often farm in ways that use the land as a natural carbon sink. Little is however known about how grassroots participation can be leveraged to increase environmental consciousness among indigenous subsistence farmers. Nyong et al. (2007) have for instance assessed how indigenous knowledge in the Sahel region of Africa has been relied on for decades by locals to adapt to climate change. These findings are in tandem with those of Berkes and Usher (2000) in their assessment of indigenous knowledge from across cultures in the world. In a similar fashion, Guthiga and Newsham (2011) have conducted a comparative study of scientific rainfall forecast and indigenous rain-making in Kenya and discovered that both approaches converged on similar predictions of rainfall patterns. In the context of Ghana, the indigenous knowledge of the Asante tribe and the Dupong community have also been examined (Adom & Kquofi, 2016; Opare, 2016).

In spite of the relevance of participatory approaches to co-create environmental conscious farming practices, there is little collaborative work between agro-technocrats and indigenous farmers. Agro-technocrats rather seem to downplay the importance of indigenous farming practices. Their inability to learn from indigenous farmers has often resulted in difficulties in tailoring technocratic support to meet indigenous farmers' needs (Chambers, 1998; Gyawal & Thompson, 2016; Pretty, Chambers, & Harris, 2003); a problem described by Nightingale et al. (2019) as the technical trap. Given these challenges, there is the need for a more nuanced application of environmental consciousness in indigenous subsistence farming. This improved behaviour change would require knowledge cross-fertilisation between technocrats and indigenous farmers since such knowledge cross-fertilisation would bring forth environ-

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