

Community mobilization towards the conservation of black crowned cranes in Jimma Zone, South-western Ethiopia

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1. Introduction

The black crowned crane is categorized under vulnerable species (IUCN, 2012). Geographically, this species is restricted to Africa continent which stretches from Senegal and Gambia on the Atlantic coast to the upper Nile River basin in Sudan and the Ethiopia highlands (Meine and Archibald, 1996; Boere *et al.*, 2006). Its population is declining across its home range and even disappearing in some countries (Beilfuss *et al.*, 2007; Harris and Mirande, 2013). This birds use open grasslands, shallow wetlands and grasslands adjacent to water bodies for feeding, breeding and resting (Williams *et al.*, 2003; Diagona, 2006). In addition to grasslands and wetlands, black crowned cranes are also frequently observed on agricultural field for feeding purpose. In the population range countries, wetland degradation and loss is become serious threat for the species survival. In a human-altered world where biodiversity is in decline and conservation problem abound, there is an urgent need to ensure that the future generation of conservation scientists have the knowledge, skills, and training to address these problems (Chapman *et al.*, 2015). In Ethiopia, black crowned crane habitats are being degraded due to lack of clear wetland protection and conservation rules and regulations (Aynalem *et al.*, 2012). Draining wetlands for infrastructures development and constructions of huge foil greenhouses are some of the activities that have a negative impact on crane habitats (Nowald *et al.*, 2013).

2. Methodology

The Study Area Descriptions

This study was conducted in Jimma zone in Oromia National Regional State in south-western part of Ethiopia. Jimma zone is one of the thirteen zones of Oromia National Regional State (Fig. 3) which geographically lies at south-western part of Ethiopia. Jimma Zone has the total population of 2,486,155 [Central Statistics of Ethiopia (CSA), 2007]. From the total, 2,204,225 (88.66%) is the rural population, which directly depends on agricultural activities.

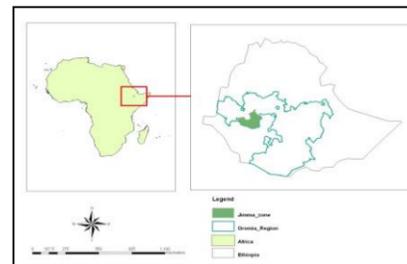


Figure 3: Map of the study area

Bottom-up and top-down conservation approach

For public capacity building and awareness creations we used the combination of bottom-up and top-down approaches. Conservation campaign is not a simple task that accomplished over a couple of months or years, but it has several challenges (Chapman *et al.*, 2015) from the communities' sides since they are dependent on natural resources. Vogt *et al.* (2013) recognized that humans are an integral part of most ecosystems, and will likely influence the accomplishments of the designed projects. To overcome conservation challenges, it is important to engage practitioners, policy makers, and stakeholders. No single strategy is sufficient to address the issue of conservation. The combination of bottom-up and top-down approach should be considered to established effective and acceptable conservation plan. The bottom-up approach refers to changing the attitude and perceptions of local communities towards conservation at the grassroots level; enhancing the capacity of the local communities to change their understanding on the use of conservation practices. A bottom-up approach performed through a participatory process with the relevant stakeholders and experts (Girard *et al.*, 2015). The other mechanisms is the top-down approaches which involves conservation interventions with the support of governmental organization that have the capacity to mobilize and change the society on a large scale (Musengezi, 2015). In both approaches environmental education is a critical component of conservation actions. Various capacity building was conducted in Jimma Zone in order to minimize the threats of black crowned cranes.

Conclusions and recommendation

The black crowned cranes are under threats because of habitat loss and degradation. The local communities are converting wetlands in to agricultural lands due to lack of awareness on socio-economic and ecological value of healthy, intact wetlands. Thus, public awareness is crucial to minimize the pressure of human beings on nature specifically wetlands. Awareness creations are strongly important on the value of wetlands. Moreover, population monitoring and national crane population census is important to estimate the status of the species for further conservation actions. Finally, the conservation of black crowned cranes is an essential activity not optional.



Figure 2: Degraded habitat of black crowned cranes and the use of farmland



Figure 4: Public awarness creation towards black crowned cranes conservation

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