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TITLE OF PROJECT	Investigating the factors that influence fluctuations in populations of key medium sized herbivores on Cawston Ranch, Umguza District, Zimbabwe.

ABSTRACT

Game ranching as a land use type is one facet of Zimbabwe's effort to manage and conserve its wildlife resource in extensive areas, where crop production is poor. Long term monitoring of animal population and implementation of management practices is needed to ensure that this industry is sustainable. While Innumerable findings have quantified African herbivore declines attributed to various drivers, population fluctuations have been sparingly studied in Zimbabwean game ranching enterprises by multiple interacting factors. On the same note, most studies done have focused on social factors realizing human population growth, excessive off-take through harvesting methods and poaching (e.g East,1998; Lindsey et al., 2009) among others. The present study aims to substantiate, evaluate and investigate the existence and extent of the causes on the apparent decline in abundance of three key herbivore species (sable (*Hippotragus niger*), tsessebe (*Damaliscus lunatus*) and kudu (*Trageluphus strepsiceros*) in Cawston ranch, Bulawayo. This study seeks to determine the targeted herbivore population trends from assessment of census records. This followed by modelling the targeted herbivores' response to various variables. This will be achieved through quantifying spatial and temporal environmental factors, through processing of remotely sensed images of vegetation and annual fire extent to estimate vegetation change, depiction of rainfall patterns from rainfall records and annual stocking rates guided by (Coe et al 1976; Fritz & Duncan, 1994) approaches. Subsidiary objectives of the study are aimed to disseminate generic knowledge on the current status of recruitment success and number of trophy males in all populations, determined through field assessments from observations of group sizes, age-specific sex ratios and individual adult males based on horn morphology and body size respectively. This research intends to reinforce resource management with scientific principles and promote land-use plans more adapted to wildlife conservation.