

Abstract:

Conservation of biological diversity is mainly done through the establishment of a protected areas system. There are over 100,000 protected areas in the world. Kenya has a well established protected area system whose area accounts for almost 8% of Kenya land area. Kenya Wildlife is the lead agency in wildlife conservation and management in Kenya oversees management of wildlife in protected and outside protected areas in the country. Currently Kenya has 27 gazetted national parks spread out in the country. Increasing human population, change in land-use, land fragmentation, urbanization and economic growth continue to exert pressure on the limited natural resources. This progressively leads to loss of critical ecosystem attributes thus posing a threat to the ecological integrity of protected areas. This study undertook to investigate, identify and establish the typology and severity of environmental hazards in the Lake Nakuru National Park and Nairobi National Park both of which are located very close to fast growing urban centres. The study also sought to establish whether the environmental hazards in the two national parks were similar. The data for this study was mainly generated from the KWS occurrence books maintained by each of the two parks in the period of study 1999 to 2008. Tourism visitation data was used to establish whether there was a relationship between park visitor numbers and environmental hazards reported. The study also aimed at establishing the magnitude of environmental hazard exposure for each park. The findings of this study indicated that both parks were exposed to a wide range of environmental hazards dominated by human wildlife. conflict, livestock incursion, illegal firewood collection, bush-meat poaching, trophy poaching and wildlife snaring. The results however indicated that a significant difference existed in the environmental hazards reported in the two parks. Overall the study findings indicated that Nairobi National Park was more exposed to environmental hazards with a count of 224 incidents out of the 437 total environmental hazards reported in the two parks during the study period. A significant strong positive correlation was found between the number of visitors and environmental hazards reported. The results indicated that environmental hazards occurred in areas within and outside the national park boundaries. The findings clearly indicated that certain environmental hazards that had potential to adversely affect the ecological integrity of the ecosystem were not captured. Such hazards include invasive species and wildlife disease outbreaks among others. This study recommends comprehensive environmental risk assessment focusing on all park attributes to enhance management of the ecological integrity of the protected areas. Such comprehensive environmental risk assessment would form a good baseline for the Environmental Management Systems implementation process.