

## Chapter

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# Impact of Short-Term Flooding on Livelihoods in the Kenya Rift Valley Lakes

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## Abstract

Short term flooding episodes can have devastating impacts on both the natural processes and community livelihoods. The Lakes Baringo, Bogoria, Nakuru and Naivasha lie within the arid and semi-arid northern part of the central rift valley in Kenya and are vulnerable to climatic variability with particular challenges related to water resources. This chapter presents the extent of flooding of four lakes in the central rift valley in Kenya over the period from January 2010 to December 2014. Documentation of the changing spatial extent of the water levels in the four lakes was conducted using Geographic Information Systems (GIS) digital techniques and information extraction and representation from selected Landsat satellite image data for the years 2010, 2013 and 2014. Results show an increase in the lake levels over the study period and the extent of flooded areas that is highly influenced by the geomorphology of the environs of the lakes. The rising lake levels have affected the ecology of the riparian areas of the lakes thus impacting on the biodiversity, wildlife, tourism infrastructure and the settlements around the lakes. The communities settled especially around Lake Baringo have been displaced and their livelihoods affected.

## Keywords

Central rift valley lakes – Geomorphology – Lake level rise – Flooding impacts – Livelihoods