

Chapter 17

Desiccation and Other Factors Affecting Community Life in the Mopipi Area Along the Boteti River in Botswana

Eagilwe M. Segosebe
University of Botswana, Botswana

ABSTRACT

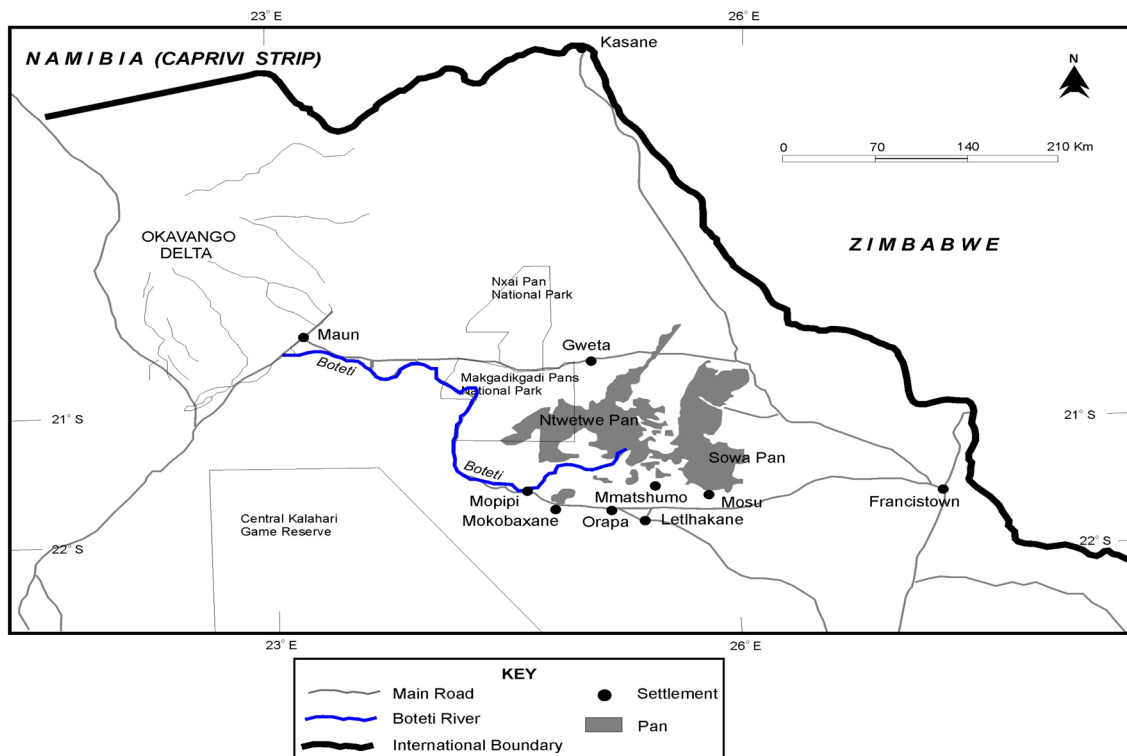
The inhabitants of Mopipi who live in the downstream section of the Boteti River previously (prior to 1982) enjoyed abundant natural resources as water flowed to the periphery of their village into Mopipi pan. Flood failure over the last two decades has meant that the people of Mopipi are subjected to both natural and socio-economic stressors, which negatively impact their livelihoods. Based on field observations and focused group discussions this paper attempts to explain major influences of livelihoods in Mopipi village and surroundings. Variable and limited rains together with the pattern of the Boteti River flow into the Mopipi Pan in the past are seen as major natural factors. In particular, the flood failure in the mid-1980s coincided with drought conditions which caused considerable hardships to the local community. Local perceptions of constraints in the natural resource base due to droughts and flood failure are contextualized in relation to stresses produced by natural and social processes.

INTRODUCTION

Mopipi community refers to the communities living in the *Mopipi* and *Mokobaxane* villages located in the Central District. Populations of the two villages are relatively small. According to the 2001 population census report, the population of *Mopipi* was 3, 066, while that for *Mokobaxane* was 1, 290 (Central Statistics Office 2002). The two settlements are located less than 15 kilometres apart and are situated about 70 kilometers west of Orapa (one of the diamond mining towns) along the Orapa-Maun road and south of the *Makgadikgadi* Salt Pans, the biggest of which are the Ntwetwe and Sua Pans (Figure 1a&b). The area is characterized by low precipitation with mean annual rainfall between 350 and 400 mm (Bhalotra 1985).

DOI: 10.4018/978-1-5225-3440-2.ch017

Figure 1. Location of the Study Area



Local soils vary according to parent material and formation, but they are generally characterized as sandy and poorly drained. Along the *Boteti* River fluvisols, which have a relatively high fertility level are common and are the most preferred for agricultural production.

This is evident in the many fields that are found strung along the *Boteti* River bed or bank, as well as, in its floodplains and tributaries. The Center for Applied Research (CAR 2006) attributed this concentration of cultivated fields along the river channels to the fact that away from the channels, soil salinity tends to increase. Black clay soils (vertisols) also occur along drainage lines, albeit in isolated areas. Although they are fairly fertile, black soils are difficult to work because they are rich in clay, poorly drained, and harden and develop cracks upon drying, which jeopardize their productivity. As will be indicated later, in the absence of annual flood the soil is chronically hardened, making it difficult to work. According to CAR (2006) a land suitability index for traditional dryland farming involving maize, sorghum, and millet developed by Barnhoorn et al indicated that the majority of soils in the District are of marginal suitability for maize, implying that they were better suited to the other two crops. But, local people choose to grow maize because it is minimally labour intensive and less susceptible to destruction by pests, particularly quelea birds.

Method

Gathering of data pertaining to community perception began with a pilot trip to the study area. A meeting was held with the chief of *Mopipi* village followed by two *kgotla*¹ meetings at both *Mopipi* and

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/desiccation-and-other-factors-affecting-community-life-in-the-mopipi-area-along-the-boteti-river-in-botswana/187733

Related Content

Contribution of Urban Destinations to Physical Activity: Insight From Nationwide Smartphone Trajectory Data in China

Shutao Wei, Li Li, Jiahao Pan, Wei Tuand Xiaolu Zhou (2022). *International Journal of Applied Geospatial Research* (pp. 1-17).

www.irma-international.org/article/contribution-of-urban-destinations-to-physical-activity/295864

A Collaborative Academia-Industry Approach to Developing a Higher Education Programme in Building Information Modelling

Mark Kelly, Mark Costello, Gerard Nicholsonand Jim O'Connor (2016). *International Journal of 3-D Information Modeling* (pp. 39-54).

www.irma-international.org/article/a-collaborative-academia-industry-approach-to-developing-a-higher-education-programme-in-building-information-modelling/172180

Virtual Environments for Geospatial Applications

Magesh Chandramouliand Bo Huang (2013). *Geographic Information Systems: Concepts, Methodologies, Tools, and Applications* (pp. 216-226).

www.irma-international.org/chapter/virtual-environments-geospatial-applications/70443

Public/Private BIM: An Irish Perspective

John Deeney, Alan Horeand Barry McAuley (2014). *International Journal of 3-D Information Modeling* (pp. 16-28).

www.irma-international.org/article/publicprivate-bim/106849

An Evolving Residential Landscape in Post-Katrina New Orleans: Racial Segregation Among Racial and Ethnic Groups, 2000-2010

John Byron Straitand Gang Gong (2012). *International Journal of Applied Geospatial Research* (pp. 1-19).

www.irma-international.org/article/evolving-residential-landscape-post-katrina/70656