

## ABSTRACT

Almost every country in the world has experienced a border dispute to varying degrees of conflict and the Sudan – South Sudan border region is no exception. Distribution of spatial information to all sides in border negotiations may help to ensure a smoother functioning negotiation, and thus avoid armed conflict. In this thesis, the likelihood of border conflict is measured by adapting the *opportunity* and *willingness* framework, and then determining the *conflict border* (Starr 2002; Starr and Thomas 2005). Conflict occurs where the border region has infrastructure in place to mobilize militarily and the area is salient, but not so salient that mutual cooperation between states has occurred. This thesis demonstrates the utility of a GIS analysis for border placement negotiations between Sudan and South Sudan by developing a conflict border index based on the opportunity and willingness distribution within a 100 kilometer border region. The opportunity and willingness analysis proves effective in determining the utility of GIS in border determination. Areas with medium levels of opportunity and willingness were located and therefore could be avoided in border placement as a way to reduce potential future conflict.