

## **Abstract**

Landsat (TM) of 1986 and 1990 and Landsat (ETM+) of 2000 and 2004 for Nakasongola district were obtained and analyzed using the ILWIS 3.6 software using unsupervised classification. An overlay analysis of satellite images was conducted in order to understand the patterns of land use and cover change. Cultivation, coniferous plantations, bush and woody encroachment were the most pervasive land use and cover types encroaching on grasslands. The area covered by grassland decreased by 13.1% between 1986 and 2004. Between 1986 and 1990, much of the grasslands were converted to bushland (38,608 ha), woodland (19,659 ha) and cropland (9,159 ha) while between 1990 and 2000 were converted to woodland (21,838 ha), cropland (5,912 ha) and bushland (4,506 ha) and between 2000 and 2004, 33,354, ha were converted to woodland, 12,029 ha to bushland and 6,114 ha to cropland. Bush and woody encroachment engulfed 65%, 50% and 54% of grasslands in the periods of 1986 – 1990, 1990 – 2000 and 2000 – 2004 respectively. The rate at which grassland is lost to other land use/cover types is greater than the rate of grassland expansion meaning that grasslands are at the verge of disappearing if no conservation measures are instated to protect them.