

Forest and woodland depletion in the Lake Elementeita basin, Kenya

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Abstract:

Colour infra-red LANDSAT imagery was used to estimate areal changes in forest and woodland vegetation of the Lake Elementeita watershed (335 km²) in Kenya's rift valley. The rate of depletion from 1973 to 1984 was estimated to be between 4 and 11 View the MathML source. During this period, the basin was stripped of a total of 88 km² of woodland and forest (or 58% of the total), mostly through replacement by agro-ecosystems. This was associated with a rapid population increase estimated at 5.7View the MathML source between 1962 and 1969 and an average annual growth rate of 3.1% for the period 1962–1979. The effect of this land-use change on rates of soil erosion, water availability and lake levels is discussed.