

Simulated.

$$C_s = 160 \text{ g/l} \rightarrow 0.16 \text{ g/m}^3$$

$$\rightarrow 260 \text{ ton/day} \quad (160 \text{ mg/m}^3)$$

average discharge of river into the wet
land is $7.68 \text{ m}^3 \text{ s}^{-1} = 663,552 \text{ m}^3/\text{day}$

$$5.73 \sim 241 \text{ Mg km}^{-2} \text{ yr}^{-1}$$

average.

$$45 \text{ Mg km}^{-2} \text{ yr}^{-1}$$

314 km^2

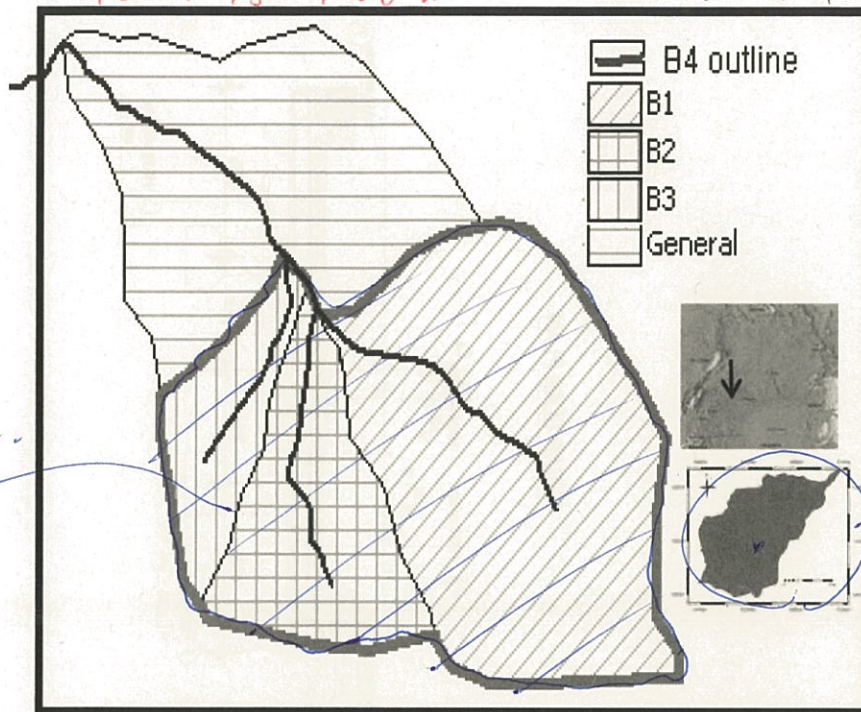


FIG.1. Location of the Sinje micro-catchment. Mt. Elgon and Manafwa Catchment are shown as inlets sub-catchment

The elevation of the catchment ranges from 1 240 to 1 560 m.s.l with a mean elevation of 1 401 m. The climate of Mount Elgon is classified as humid subtropical and is dominated by seasonally alternating moist south-westerly and dry north-easterly air streams. The rainfall distribution shows a weak bimodal rainfall pattern. Rainfall occurs between April to December, with June and July the lowest. Mean annual rainfall amounts over 1500 mm and is a function of altitude (Figure.2). The average minimum and maximum temperatures are 15 and 28°C respectively for the catchment.

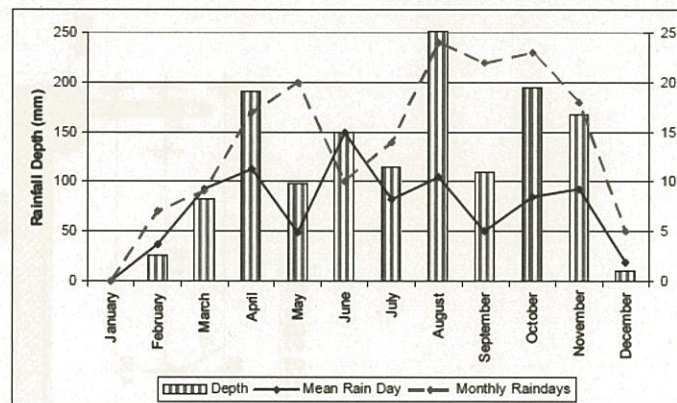


FIG. 2 Mean monthly rainfall total and rain days in 2007

$$1 \text{ day} = 24 \text{ hr} * 60 \text{ min} * 60 \text{ sec.}$$

$$= 86,400 \text{ sec}$$

observation/monitoring

✓ runoff.

✓ Soil loss.

@ 12 geo-ref. sites

✓ TSS

@ 4, out of 12 sites

Manufura Catchment = 314 km²



Hot Spot / Sinje

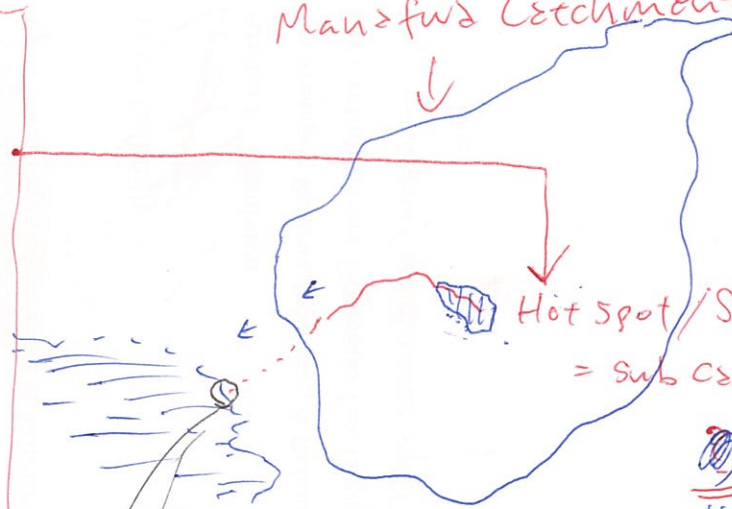
= sub catchment

62.8 km²
(20%)



5.73 ~ 241 Mg/km²/yr

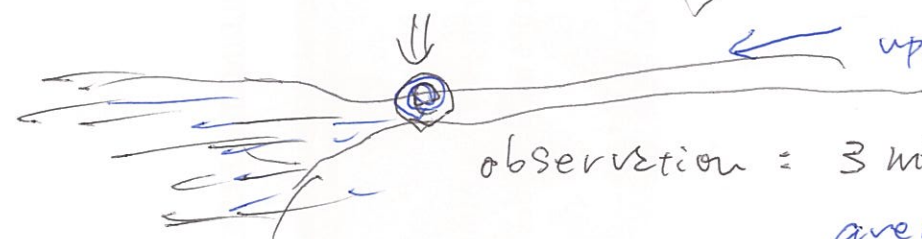
ave. 45 Mg/km²/yr



wetland / Doho area

entering point

upper



wetland / Doho area

observation = 3 m³/s (base), 25 m³/s (peak)
average annual 7.7 m³/s

simulated: 3 m³/s (base), 28 m³/s (peak)



✓ simulated ave. concent. 160 g/l equivalent to 260 ton/day (93,600 ton/yr)
20% of the catchment generates 70% of the sediments of the catchment.

Note:
1 day = 86,400 sec.

165,000 m³/day



242,725,000 m³/yr

0.00016 t/l
0.16 t/m³