

$$F(x) = \sum W_i . X_i \quad \dots (1)$$

$W_i$  = normalised criteria scores

$X_i$  = criteria weights

$$NDVI = \frac{NIR-R}{NIR+R} \quad \dots (2) \text{ (Wang et al., 2003)}$$

(Where  $NIR$  = Near Infra-Red band and  $R$  = Red band)

$$TWI = \frac{a}{\tan b} \quad \dots (3) \text{ (Moore et al., 1991).}$$

$$SPI = a \times \tan b \quad \dots (4) \text{ (Pourghasemi et al., 2013)}$$

(Where  $a$  = upslope area and  $\tan b$  = local slope in radians)

$$V = SV \cap PV \quad \dots (5)$$