

abstract

The use of satellite GPS/GSM-collars for tracking wild animals' movement and distribution has become popular in wildlife conservation particularly for the endangered wildlife species. In Kenya, satellite collars are frequently being used to monitor movements of large mammal species such as elephants (*Loxodonta africana*), lions (*Panthera leo*), grevy zebras (*Equus grevyi*), spotted hyenas (*Crocuta crocuta*) and wildebeests (*Conochaetes taurinus*) among others. We highlight various applications of satellite collars in mapping of elephant ranges and corridors, human-elephant conflict resolution and monitoring of translocated elephants. We captured and collared two adult female elephants in Siyapei and Olooltoto areas of Narok North district in June to July, 2011, to track elephant movements and frequency of crop raids through a special collar website located at ranger security office in the area. Siyapei and Olooltoto areas are known for frequent human elephant conflict and loss of wildlife habitat attributed to increasing human population and rapid conversion of wildlife range land into agriculture. The collars transmitted GPS locations of elephants to the website at an interval of every 4 hours for 2 months. Wardens and rangers were able to monitor the elephant movements from the website and responded to crop raid in time hence minimizing crop damages and reducing vehicle patrol costs. The collar results helped KWS to identify elephant herds for translocation from Siyapei to Masai Mara NR. The translocated elephants were further monitored using satellite collars to ensure that they settled in the new area. We also report various challenges and experiences of using collars for elephant monitoring in Kenya.

Key words: Satellite collars, *Loxodonta africana*, Masai Mara, human elephant conflict, monitoring.