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A Field Study in the Status and Threats of Cultivation in Kimana and Ilchalai Swamps in Amboseli Dispersal Area, Kenya

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ABSTRACT

The scarcity of water and dependence of local communities on wetlands for resources and services is a common occurrence in dry rangelands such as Amboseli in Kenya. There are only a few swamps outside Amboseli National Park available to the Maasai, livestock and wildlife. Such swamps may disappear in the near future because of conversion to cultivation. This study established the current size and threats to Kimana and Ilchalai near Amboseli National Park. Swamps were regularly used by over 15 large mammal species among them elephants, buffalo, wildebeest, zebra, gazelles and hippopotamuses. However, only 15.7% of Kimana Swamp and 36.1% of Ilchalai Swamp remained unconverted to cultivation, with the rest of the remaining swamp area converted to agriculture. Cultivation was mainly done by non-Maasai land leasers, and for mainly commercial purposes. Swamps were converted because of adequate and free water, cheap lease fee, and their fertile soils. Although concerned with swamp conversion, most cultivators were ready to expand cultivation in other swamps. These findings demonstrate how unsustainable resource use and swamp conversion can seriously threaten critical resources for local livelihoods and wildlife conservation.

KEYWORDS

Amboseli Ecosystem, Irrigated Agriculture, Kenya, Maasai Livelihoods, Resource Conservation, Swamps

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References

- [1] J. Worden, R. Reid and H. Gichohi, " Land-Use Impacts on Large Wildlife and Livestock in the Swamps of the Greater Amboseli Ecosystem, Kajiado District, Kenya," The Land Use Change, Impacts and Dynamics (LUCID) Project. Working Paper Series Number 27, International Livestock Research Institute, Nairobi, 2003. <http://www.lucideastafrica.org>
- [2] P. Rogers, " Facing Freshwater Crisis," Scientific American, 2008. www.SciAm.com
- [3] Earth Watch Institute, " Emerging Water Shortages," World-watch News Release, 1999. <http://www.earthwatch.org/node/1654>
- [4] UNESCO (United Nations Environmental Scientific and Cultural Organization) " Water Availability and Deficits," 2000. http://www.unesco.org/science/waterday2000/availability_and_deficts.html
- [5] S. Vaknin, " The Emerging Water Wars," Published by United Press International (UPI), 2002. <http://www.samvak.tripod.com/pp146.html>
- [6] D. J. Campbell, H. Gichohi, A. Mwangi and L. Chege, " Land Use Conflict in Kajiado District, Kenya," Land Use Policy, Vol. 17, No. 4, 2000, pp. 337-348. doi:10.1016/S0264-8377(00)00038-7
- [7] J. Kioko, P. Muruthi, P. Omondi and P. Chiyo, " The Performance of Electric Fences as Elephant Barriers in Amboseli, Kenya," South African journal of Wildlife Research Vol. 38, No. 1, 2008, pp. 52-

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- [8] E. Barrow, P. Lembuya, P. Ntiati, and D. Sumba, " Knowledge, Attitudes and Practices Concerning Community Conservation in Kuku and Rombo Group Ranches around Tsavo West National Park," Community Conservation Discussion Paper No. 12, African Wildlife Foundation, Nairobi, 1993.
- [9] N. W. Sitati, M. J. Walpole and N. Leader-Williams, " Factors Affecting Susceptibility of Farms to Crop Raiding by African Elephants: Using a Predictive Model to Mitigate Conflict," *Journal of Applied Ecology*, Vol. 42, No. 6, 2005, pp. 1175-1182. doi:10.1111/j.1365-2664.2005.01091.x
- [10] M. M. Okello and J. W. Kiringe, " Threats to Biodiversity and the Implications in Protected and Adjacent Dispersal Areas of Kenya," *Journal of Sustainable Tourism*, Vol. 12, No. 1, 2005, pp. 55-69. doi:10.1080/09669580408667224
- [11] E. Fratkin, " Pastoral Land Tenure in Kenya: Maasai, Samburu, Boran, and Rendille Experiences 1950-1990," *Nomadic Peoples*, Vol. 34, No. 35, 1994, pp. 55-68.
- [12] D. Western, " Amboseli national park. Enlisting Landowners to Conserve Migratory Wildlife," *Ambio*, Vol. 11, No. 5, 1982, pp. 302-308.
- [13] M. M. Okello, " Land Use Changes and Human-Wildlife Conflicts in the Amboseli Area, Kenya," *Human Dimensions of Wildlife*, Vol. 10, No. 1, 2005, pp. 19-28. doi:10.1080/10871200590904851
- [14] J. H. Zar, " *Biostatistical Analysis*" 4th Edition, Prentice- Hall, Upper Saddle River, 1999.
- [15] D. Western, " Water Availability and Its Influence on the Structure and Dynamics of a Savanna Large Mammal Community," *East Africa Wildlife Journal*, Vol. 13, 1975, pp. 265-286.
- [16] T. Burkey, " Faunal Collapse in East African Game Re- serves Revisited," *Biological Conservation*, Vol. 7, No. 1, 1994, pp. 107-110.
- [17] J. Kioko, J. M. Okello and P. Muruthi, " Elephant Num- bers and Distribution in the Tsavo-Amboseli Ecosystem, South-Western Kenya," *Pachyderm*, Vol. 40, 2006, pp. 61-68.
- [18] R. Mace, " Transition between Cultivation and Pastoralism in Sub-Saharan Africa," *Current*