CONSERVATION OF WHITE (Ceralotherium simum) AND BLACK RHINOCEROS (Diceros bkornir) IN ZIMBABWE: EFFECTS OF HORN REMOVAL

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In response to an increased poaching threat an experimental dehorning exercise on white rhinoceros was approved by the Ministry of the Environment and Tourism. in April 1991 for Kazuma Pan and Hwange National Parks in northwestern Zimbabwe. In the first phase 72 white rhinoceros were immobilized (49 adults, 10 sub-adults and 12 calves; 37 males and 34 females) and 59 dehorned in 1991. Forty eight of these animals were immobilized from a helicopter and 23 on the ground. Combinations of etorphine and xylazine (n=44), etorphine and fentanyl (n=13), etorphine and detomidine (n=l) and etorphine alone (n=9) were used. Five animals died during the operation (mortality rate=7%). A small gas powered chain saw was used to cut off the horn, the base was trimmed up and the surface covered with Stockholm tar. Horns were only removed from adults and some sub-adult animals. Only 3 of the 59 animals have been killed by poachers in 1992, and the poachers behavior has been different. Although attempts were made, no horn was taken, instead approximately 15kg of meat was removed (unusual behavior) and evidence showed that they tracked a fourth (dehorned) animal, spent time observing this animal, but did not shoot it.

A second phase, to be implemented in 1992, will involve the reimmobilization of a selected number of the dehorned animals to monitor horn regrowth, and dehorning of those animals that were missed in 1991. A major research project has been implemented in conjunction with the horn removal. Objectives include: I) to evaluate the effectiveness of dehorning in reducing the poaching risk, 2) to characterize phenotypic variation in horn size and growth, and to document rates and form of regrowth, 3) to examine interactions of both horned and dehorned rhinos with predators, and 4) to investigate the influence of horn and body size variation in dominance and reproductive performance. In addition to the dehorning of more white rhino, a major dehorning program for black rhino will be implemented in 1992.