

III.VIII The work of *in situ* rhino conservation projects

Managing a rhino programme

The continental strategic framework and direction for African (black and white) rhino conservation is provided by the IUCN Species Survival Commission (SSC) African Rhino Specialist Group (AfRSG). Its Action Plan, and the various regional, national and organisational rhino conservation plans, strategies and policies, promote a range of strategies needed successfully to conserve African rhinos. These strategies and plans all recommend managing rhinos in any individual Park as part of a bigger regional or national metapopulation; and all set minimum target goals of achieving an overall population increase of at least 5% per annum. To some extent, rhino metapopulation conservation can be seen as a form of portfolio investment management.

Successful rhino conservation involves a combination of seeking to limit mortalities on the one hand (good protection and law enforcement, efforts to reduce illegal demand for horn, good biological management) and promoting rapid population growth on the other (through good biological management). The latter in particular seeks to use translocations to ensure that the reproductive performance of as many populations as possible remains high, as well as helping to maintain genetic diversity to maximise long-term metapopulation viability.

Protection

Effective field protection has been critical to success over the last decade. Experience indicates that to achieve success, it is necessary to concentrate law enforcement at or above minimum threshold levels. Apart from having a sufficient manpower density on the ground, field rangers need to be well trained, equipped and effectively deployed. In some reserves, additional specialist anti-poaching units operate in addition to standard field ranger patrols.

While pro-active and reactive anti-poaching patrols can reduce the level of poaching and chances of catching rhino poachers, experience has shown that the setting up and running of informer networks can prove particularly useful and cost-effective. Effort and training is also required to ensure the effective investigation, successful prosecution and sentencing of those guilty of rhino crimes. Ultimately, rhino crimes are perpetrated because of the illegal demand for rhino horn, and so efforts are being made to reduce the illegal demand where possible. Another important aspect of law enforcement is the management, monitoring and protection of legal rhino horn stockpiles.

Biological management

To benefit from compounding growth, it is important to maintain rhino populations at

productive densities, and prevent the density-dependent declines in reproductive performance (lengthening inter-calving intervals, older ages at first calving, reduced calf survival, increased mortality rates etc.) that can occur if rhino populations are left to approach or exceed ecological carrying capacity (ECC). It is recommended that populations be kept productive by annually translocating at least 5% and not more than 8% of populations that have exceeded 50% of estimated ECC annually. In smaller populations, it is recommended that densities should not be allowed to exceed 75% of ECC. Techniques exist to estimate ECC for black rhino and these are continually being refined. The impact of potential competing browsing species such as elephants, giraffe and nyala, as well as the impact of any vegetation changes for rhino, also need to be considered.

Surplus rhinos that are removed from more heavily stocked populations are used to create new or enhance existing populations with a good potential for high growth. Apart from the strategic benefit of having more eggs in more baskets, translocations aim to improve or maintain performance in established populations, whilst at the same time to create new rhino investments with rapid growth potential. Due to the effects of compounding, small differences in rhino metapopulation performance translate to large differences in numbers of rhinos in only a few years, which is why so much effort is expended in trying to keep rhino populations productive.

Regular monitoring and reporting on the reproductive and demographic performance of populations using standardised systems, provides managers with the necessary information to make more informed and better biological management decisions, as providing measures of whether or not metapopulation management goals are being met. Monitoring the reproductive performance of females and accurately estimating rhino numbers are two key aims of monitoring. Regional synthesis of the results of this monitoring also enables managers of a park to put the performance of their rhino population in context, as well as learn and share lessons from past experience, which in turn can be used to further refine best-recommended management practices. Continental rhino monitoring training courses have been developed by the AfRSG and these focus on training local trainers so they can train local staff on site.

Coordination

This is achieved through IUCN's AfRSG, regional groups such as SADC's Regional Programme for Rhino Conservation and Rhino Management, Rhino Recovery and Rhino and Elephant Security Groups as well as national and organisational rhino committees. National plans seek to develop and implement an effective coordination framework for conservation action, status reporting, and decision-making among all stakeholders.

Capacity-building

Another key aspect of any successful strategy is to ensure that sufficient human

resources and skills are available and deployed efficiently. Appropriate training is required to develop and maintain the necessary capacity for all aspects of rhino management (monitoring, field law enforcement, translocations, habitat assessments, crime investigations etc.). The lack of a training culture in some conservation organisations and staff turnover are problems that limit capacity.

Economic and social sustainability

Finally, for rhino conservation to have a long-term future, it is essential that support (political and public) for rhino conservation is in place and fostered. As a result an increasing effort is being made to integrate local communities into rhino conservation efforts in an attempt to ensure the sustained flow of benefits from conservation and / or management of rhino parks contributes to the social and economic development of neighbouring communities.

Successful rhino conservation is not cheap. It can cost as much as \$1,000 per km² per year. It is therefore essential to ensure that the necessary financial budgets and manpower to undertake vital rhino conservation activities are secured from government, donor agencies and in some parts of the world (notably the SADC region of southern Africa) also from the sustainable use of rhinos (tourism, live sales and limited controlled sport hunting). Declining national budgets for conservation is one of the major problems facing rhino conservation agencies today, and donor funding and support is playing an increasingly important role today as a result. However, despite this trend, the majority of funding for successful rhino programs in the majority of successful range states continues to come from government agencies, and private sector owners and custodians within those range states. As such, donor funding tends to be most effective where it builds on and enhances existing efforts.

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