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## THE CURSE OF SUCCESS

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### Background

Biological explanations are complex for the diagnosis of declines. However, wildlife resources that are scarce and diminishing fast, require human intervention with three fundamental steps to consolidate their resilience: explore, secure and maintain. The first two steps are less knotty because they primarily involve systematics and legal matters. But maintenance is multifaceted, requiring an undying campaign against all forms of human-induced annihilation with surgical treatments. Therefore, maintenance of biological resources as such, is not easy. The greater one-horned rhinoceros (*Rhinoceros unicornis*) is one such biological resource that requires relentless pursuit against poaching for its survival. This paper examines the classic success of Nepal's rhino conservation for two reasons: the rapid recovery of rhino population in the Chitwan Valley, which in contrast, has set-off frenzied poaching that may knock off its growth rate.

During the fifteenth century, the greater one-horned rhinoceros were widely distributed on the flood plains of the Indus (Pakistan), the Ganges (Nepal, India) and the Bramhaputra (India, Bangladesh). By late nineteenth century, rhinos were confined to the Nepal Terai, Bhutan Duars, Teesta Valley (West Bengal, India) and Bramhaputra Valley (Assam, India) (Blandford, 1888; Laurie, 1978). At present, some 2,500 rhinos survive in isolated pockets of reserves and national parks in India and Nepal.

Rhinos are known for their horns as they are believed to bear exceptional values in oriental medicine. Poaching of rhinos and penalty for poaching, are not new in Nepal. Long before 1950, there was a death penalty for poaching of the rhino (Oldfield, 1880). In Nepal, there were some 800 rhinos in the Chitwan Valley in 1950, which plummeted to 300 animals in 1959, and only 100 remained in 1966 (Willan, 1965; Gee, 1959; Spillet and Tamang, 1966). Likewise, poaching was huge. Some 72 rhinos were poached in 1954 and 60 were killed in 1958 (Gee, 1959). These widespread poaching of rhinos prompted the government to form the *Gaida Gasti* (rhino patrol team) which comprised of 130 armed men with a network of rhino guard posts all over Chitwan. By then, the Chitwan Valley had lost 70% of its 2,600 km<sup>2</sup> of forests and grassland (Caughley, 1969). Many forms of development including

malaria eradication, agriculture expansion and rampant resettlement collectively culminated into forest loss and marginalization of the indigenous Tharus. As the illegal harvest of rhinos, became extraordinarily difficult with the massive influx of people from the hills, the Royal Chitwan National Park was established in 1973 as treatment to prevent further decline in the rhino population.

### The Good News

With the establishment of the Royal Chitwan National Park (area: 544 km<sup>2</sup>, now extended to 932 km<sup>2</sup>), rhinos dramatically turned around from the brink of extinction because of stringent protective measures. For example, rhinos have increased from 147 animals in 1972 to 544 in 2000 (Pellink and Upreti, 1972; Laurie, 1978; Dienerstein and Price, 1991; Yonzon, 1994; Rijal, 2000) (fig. 1). Such a rapid population recovery, had prompted five successful rhino translocations since 1986 from the Royal Chitwan National Park to Royal Bardia National Park and Royal Suklaphanta Wildlife Reserve. Combining the rhino populations in Chitwan and its 16 year-old rhino translocation endeavors, Nepal now has a population of over 612 rhinos. Nepal also had exchanged 4 rhinos with India for 16 elephants. All these are considered tactical in conservation science. For any given demography-related stochastic event in Chitwan, alternative rhino populations in Bardia and Suklaphanta will ensure viability of the endangered rhinos in Nepal. Being adaptive in conservation approaches and by developing partnership with global communities to share the benefits of conservation with its rural communities, Nepal has been innovative.

### The Bad News

The Park after its establishment, have had a fair amount of success in suppressing rhino poaching until 1991. For example, only 35 rhinos were poached in 18 years between 1973 and 1991. Rhino poaching noticeably increased in Chitwan since 1984, which prompted the Park to come up with anti-poaching program. In 1991, three informants were hired for a total of NRs. 2,000 (<\$ 50) per month,

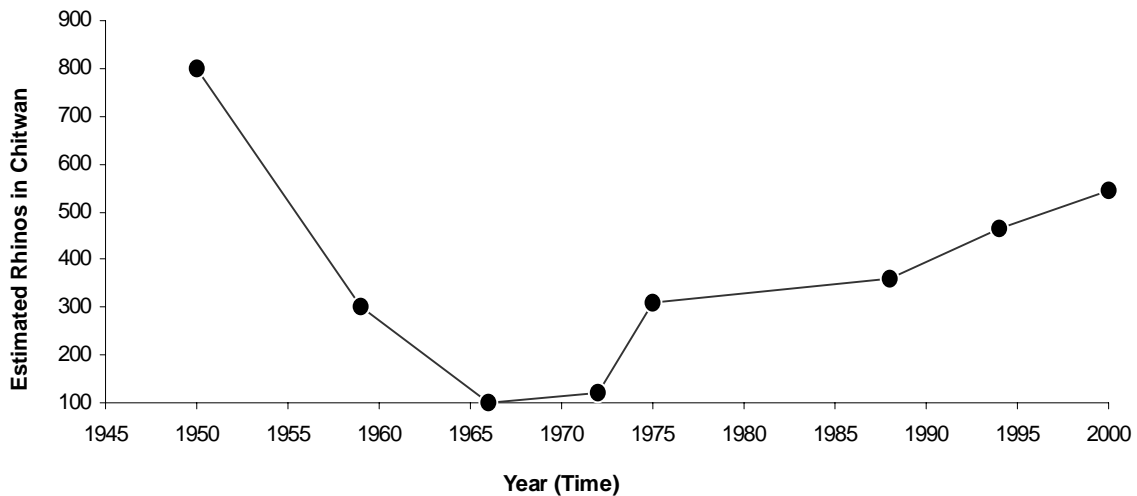


Figure 1. The greater one-horned rhino population in the Chitwan Valley, Nepal.

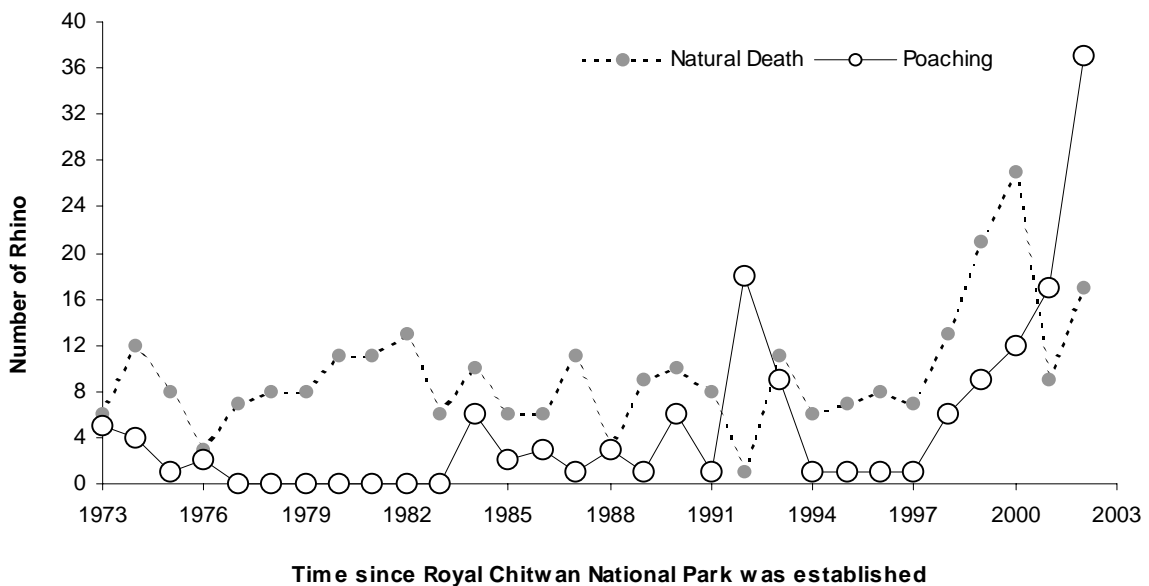


Figure 2. Loss of rhinos in Chitwan through natural death and poaching.

with funds from International Trust for Nature Conservation (ITNC). The team captured 11 poachers within 3 months. But, it did not hinder poachers to kill 18 more rhinos in 1992 as the illicit money was much more attractive than the odds of being caught. As the anti-poaching scheme needed a larger network, the Park together with the District forest offices of Chitwan, Nawalparasi, established a team of informants which enabled them to capture 76 poachers in 1994. Subsequently, only one rhino was poached then. In 1996, a network of anti-poaching units (APU) came into effect with the financial support from WWF and ITNC. However, poaching took the turn for the worst in 1998 and peaked all time high in 2002. Combining all data from various sources (Martin and Vigne, 1995; Maskey, 1998; Dhakal, 2002) including annual reports of the Department of National Parks and Wildlife Conservation on rhino mortality, poaching appears colossal with 37 rhinos poached in 2002 alone (fig. 2). Likewise, 48 natural death records were reported in 1999 – 2000. This event cannot

be explained in the light of population dynamics as no epidemic was reported then (fig. 2). A large die-off of such nature, is considered unusual. Perhaps some were injured with gunshots, who survived for a couple of days and their skeletal remains were found later with obscured evidence of poaching.

Earlier, rhinos were killed by trapping them in pits, by injuring them with spears, using wire noose and baiting them with food laced with poison. Now, they are shot with high-velocity rifles with telescope. Organized poachers know all about anti-poaching units in Chitwan, including informants and collaborators. It is plausible that they may be working through ex-poachers because they are the biggest feed back. They know what are their vulnerability and how to exploit them. Therefore, organized poachers are beneficiaries of the “social trap” (Costanza et al., 1993) as their decisions are based on local and short-term conditions of the rhino population that needs long-term conservation.

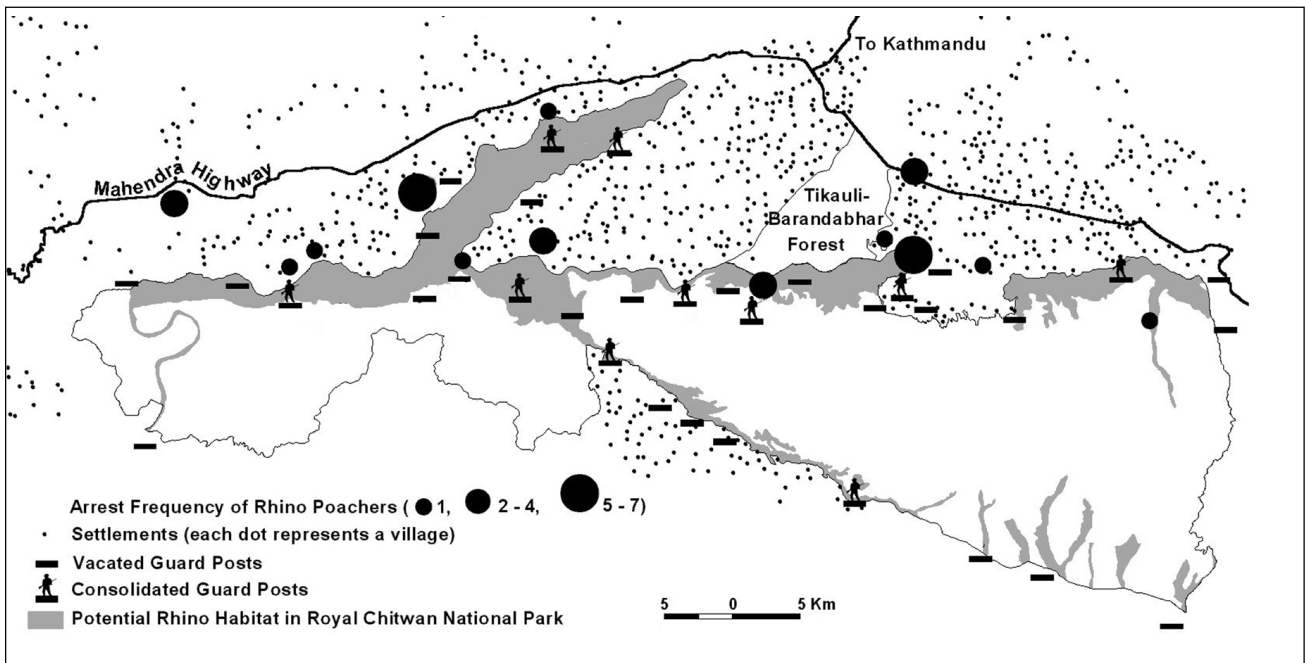


Figure 3. Settlements, highways, arrest sites and rhino habitat in Chitwan.

### Knowing the Past

All APUs were based on informants who would spend more time knowing about suspicious movements of people. Each unit had several game scouts from the Park and a few informants from neighboring villages. Their joint-responsibilities included patrolling in the Park and information gathering from villages. All raids and arrests were supervised by the park warden who would be supported with armed forest guards or army personnel. Almost all poaching arrests were made in the vicinity of the park (fig. 3).

Informants became effective because: 1) they were employed, 2) confidentiality was maintained and 3) they owned a sense of status because their work was legally connected. As over 50% of the informants were, one or more time involved in poaching earlier, they were constantly scrutinized to eliminate any duality in their present role. The informants had developed a modus operandi of their own where they worked with several collaborators who were case specific. As informants were reinforced with on-the-spot support involving very little money for every piece of information, the scheme produced results. But, this method also required the supervisor to be field-oriented and with low bureaucratic profile so as not to get noticed. With this set up, poachers had nowhere to run because a functional team of over 15 informants and 30 collaborators would eliminate each and every move to poach a rhino.

### Times are Changing

Often, poaching events are conveniently sequenced to major political upheaval. Others grossly relate to scarce

funding or facilities. In reality, it is a structural malfunction. There are seven anti-poaching units now, but staff structure has changed. Park game scouts make the bulk. Since 2001, informants were completely removed because of various managerial issues, weakening the anti-poaching programs. This void has facilitated poachers to move into villages and carryout their operations inside the Park. In addition, the Maoists uprising has affected the army to vacate 24 guard posts and only 10 guard posts are being maintained (Yonzon, 2002). All these pocket areas with abandoned guard posts may entice more poachers and timber smugglers.

All defense-related information on rhinos are out with every reporting of rhino poaching. The management yields everything about anti-poaching activities. Feeding such information to media, makes anti-poaching strategy vulnerable to poachers. Conversely, rhino poaching is much organized under the veil of secrecy.

Several arrest of rhino poachers suggest that space and time may change for poaching but poaching has never ceased. Access to rhinos is easy because of the national highway runs around the Park and there are 590 settlements between them. Every settlement is a potential shelter for rhino poachers and all rhino habitats lie adjacent to settlements (fig. 3). All these suggest that determining measurable criteria within a designated time will be the ultimate on how to avoid pitfalls of a successful recovery plan.

### Detect Early and Catch Often

Chitwan's APUs must have a greater flexibility in their operation without forgetting informants are their

backbone. Based on Alfred Sloan's philosophy, a supervisor performs three functions for any given management: 1) Determining a strategy; 2) Designing a functional structure; and 3) Selection of a control system for the slow relay of information upward until they are reinterpreted. This is not enough for APUs because change is so rapid that information that arrives late is not worth having.

Today's poachers who were once migrants, have graduated into cash economy. Now, they own vehicles, sophisticated communication and unlimited financing for illicit activities. Therefore, detecting them early is the key to the success, for which APU supervisors (wardens) must spend a greater time in the field operation, honing their field-craft, getting to know how to operate better and when to outperform others. Supervisors must have talent to generate enthusiasm among their field staff and to let the informants get on with "competence building". Therefore, the essence of intelligence gathering is intricately tied with the leadership. This is a difficult lesson for bureaucrats because it tends to replace capital with knowledge.

Chitwan generates nearly US\$ 0.6 million each year from revenue, primarily from the proceeds of wildlife tourism. Of which, over 50% are passed on to the buffer zone management which is governed by 37 user group committees involving 36,193 households. Therefore, if wildlife tourism is to remain as the mainstay because it sustains development, then poaching and illegal trade must be held in check by themselves as well.

Arresting or suppressing poaching, is foremost but it is not the end. The dynamics of the rhino population is complex, entailing many unknowns. Therefore, a road map is much needed (Caughley and Gunn, 1996). We need to answer where do we want to go with the rhino conservation? How do we get there? Will we know when we have arrived? What disadvantages may accrue? What benefits are guaranteed? We even need a contingency plan. Therefore, we must cope with present crisis and unseen future. As the road ahead is long and winding, the pursuit to save the rhino through contemporary knowledge has to be unyielding.

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