

Resource extraction in Royal Bardia National Park, Nepal.

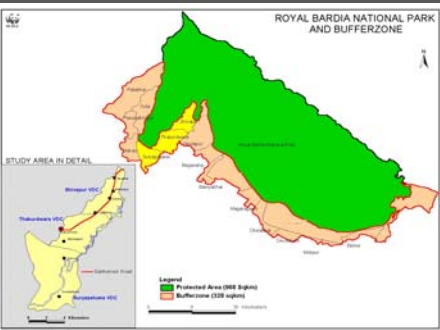


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Introduction

Resource exploitation by the communities living around the protected areas has motivated strict rules and regulations for biodiversity conservation and management (De Boer and Baquete 1998). However, strict rules that limit resource use from the park has resulted in resource use conflicts between local people and the park, resulting a negative feedback on the wildlife. In general, resource use conflicts elsewhere and in Nepal, has resulted in the degradation of natural resources. Thus, this paper aims to understand why communities extract the resources, to what extent communities are dependent on the park resources and what the impact of the communities living near the park has on the park biodiversity.



Study area

- Largest national park in low land Terai (figure 1).
- Contains large number of endangered species.
- Corridor between other protected areas in Nepal and India.
- Rich in floral, faunal as well as inhabitant diversity.

Methods

- Case study approach
- Three villages taken for comparative study falling within the buffer zone.
- Quantitative household questionnaire survey (358 Households, 12% of total) covering socio-economic data (illegal resource collection activities, and people- park problems)

Figure 1. Royal Bardia National Park and the location of the studied villages

Resource extraction: livelihood needs

- 50 different plant species were identified by villagers that were extracted from the park for different purposes such as house building, fuelwood, fodder for livestock and occasional season vegetable.
- Women and young children were mainly involved in resource collection (figure 2) and they were found active at any time of the day.
- 78% of the households in Shivapur were involved in resource extraction.
- Important factors for resource extraction:
 - Proximity and ease of collection without any charge (15% of the total surveyed households trespass the park everyday)
 - Damage due to wildlife (41% of total household reported that they extract resources as a response of damage by wildlife to their farmlands, households and harassment)
 - Livelihood need (70% of the total households responded that without extracting resource they would not be able to lit fires in their kitchen)



Figure 2. Female groups and young boys were frequently sighted inside the park collecting fuelwood and fodder resources

Impact on flora and fauna

- Figure 3 exemplifies the impact of resource extraction on flora and fauna. While trying to cut the tree, the villagers damaged the python eggs. Pythons are one of the endangered species in the IUCN Red data book of Nepal.
- Once a year the park is opened for resource collection, which is one of the incentive measures provided to the community. However illegal fuelwood collection remains one of the main problems (Lehmkuhl et al., 1988). Figure 4 shows the number of resource extraction permits sold since 1983 and has been increasing every year, and doubled by 2001 (in 2003 the figures dropped due to the Maoist's insurgency in the region as well as in Nepal).
- The daily extraction of fodder and fuelwood from the park leads to forest degradation thus leaving less suitable habitat for wildlife. This starts a vicious circle in which wildlife trespasses on to farmland destroying crops and decreasing livelihood options.



Figure 3. Python eggs damaged while cutting the wood log

References

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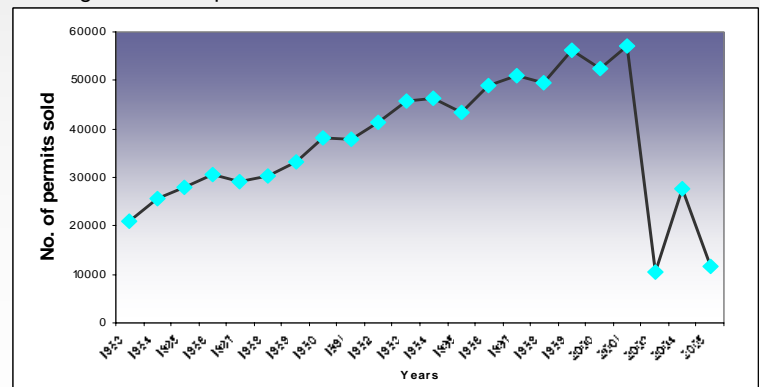


Figure 4. Graph showing the number of permits sold for resource extraction since 1983 till 2005