



## Wildlife-tourism, local communities and tiger conservation: A village-level study in Corbett Tiger Reserve, India



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### ABSTRACT

This paper presents the results of research conducted in a village on the south-eastern boundary of Corbett Tiger Reserve (CTR) which has experienced rapid and dramatic social–ecological change as a result of tiger-related tourism. Our aim was to better understand the impacts of wildlife tourism on the forest ecosystem, village structure, solidarity and institutions and consider the implications of this for tiger conservation management and policy. Our results indicate that while wildlife tourism established linkages between the village society and the global economy, it negatively impacted the local community and ecology. It also created a new village entity, tourist resorts, which are neither an individual nor a village member making dispute-resolution impossible under existing institutional structures. Our results suggest that future forest and conservation policy and management strategies should de-emphasize the monetary function of wildlife-tourism, and instead focus on building social capital and strengthening local institutions. This will likely increase the adaptive capacity of villages to the impacts of tourism and mitigate the associated ecological impacts.

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### 1. Introduction

Wildlife tourism offers a range of potential benefits to communities adjoining both forest and non-forest conservation reserves. Previous studies indicate that wildlife tourism can potentially provide opportunities for local communities to derive benefits rather than bear the costs of conservation (Ghate, 2003), offer employment that can provide alternatives to traditional livelihoods that aren't deemed compatible with conservation efforts (Negi and Nautiyal, 2003), create local incentives for conservation and ecological maintenance (Jamal and Stronza, 2009), and drive economic change and empowerment that can make local communities less-dependent on local natural resources (Billgren and Holmén, 2008). Further, by allowing people into Protected Areas (PAs), wildlife tourism has been identified as a way to create a global constituency for conservation, and mainstream biodiversity conservation into society (Karanth et al., 2012).

However, in practice, there are mixed reports on the utility of wildlife tourism to local conservation efforts – perhaps best exemplified by Tiger Reserves in India<sup>1</sup> (Post, 2010). Many successful Tiger Reserves are popular

destinations for wildlife tourism (Banerjee, 2012; Project Tiger, 2005), yet tigers were recently reported to have disappeared from two of the most popular reserves (Sariska and Panna) (Ali, 2009; Project Tiger, 2005). While local communities have been found to be generally supportive of wildlife tourism in Tiger Reserves (Karanth and Nepal, 2011; Sekhar, 2003), recent studies have questioned whether any tourism-related benefits are actually realized by local communities (Bajracharya et al., 2006; Banerjee, 2012; Karanth and DeFries, 2011; Karanth and Nepal, 2011; Sandbrook, 2010). Further, tourism in Tiger Reserves often remains tiger-centric, detracting from other biodiversity values in the forest and landscape (Karanth and DeFries, 2011; Karanth et al., 2012).

Recognizing these concerns, the Supreme Court of India passed an interim order on July 24, 2012 (Ajay Dubey v. the National Tiger Conservation Authority and others), temporarily disallowing tourism in core zones of Tiger Reserves, until the notification of fresh guidelines was prepared by the responsible authority. This order resulted in a polarized discourse in conservation policy circles (Karanth and Karanth, 2012), and raised questions about the prevalent model of wildlife tourism which, in some cases, has led to significant ecological challenges beyond the formal boundaries of reserves.

#### 1.1. Corbett Tiger Reserve and tourism

Corbett Tiger Reserve (CTR) provides an excellent case study of the effects of wildlife tourism. CTR is among the oldest PAs in India and

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<sup>1</sup> More than half the world's wild tiger populations are located on the Indian subcontinent (Chundawat et al., 2011), and 58–95% of this population live within India's 21 Tiger Reserves (Ranganathan et al., 2008).

provides crucial forest habitat for international tiger conservation efforts (Jhala et al., 2008, 2011b). CTR is estimated to be home to approximately 214 (190–239) tigers from a national population of 1520–1909 (Jhala et al., 2011b). Importantly, due to its excellent prey densities, CTR is one of only four reserves in India identified as offering the potential for long-term species survival without immigration (Jhala et al., 2011a; Khan et al., 2008; Kumar et al., 2008).

A critical threat facing tiger populations in India is reducing habitat connectivity. Based on two recent estimates, tiger occupancy from connecting habitats in India has decreased by 12.6% between 2006 and 2009–10 (Jhala et al., 2008, 2011b). In the case of the Terai Arc Landscape – the larger forested landscape within which CTR is located – rapid urban development is known to be a significant threat to biodiversity (Bindra, 2010; Dinerstein et al., 2006; Jhala et al., 2011b). Of particular concern to tiger conservation in this landscape is the south-eastern boundary of CTR (Bindra, 2010), where it connects with the Ramnagar Forest Division to create ecologically contiguous, but administratively separate, forest habitat (Contractor, 2007; Jhala et al., 2011b). The ecological connection between these two forest management areas is becoming seriously threatened by the rapid and recent growth of tourism infrastructure which results in bottlenecks (Bindra, 2010). Recognizing the significance of the issue, a recent government report (Jhala et al., 2011b) noted: “[u]rgent intervention is required to legally secure the remaining two corridors between Corbett and Ramnagar” to avoid splitting a globally important population of tigers (Jhala et al., 2011b; Ranganathan et al., 2008). However, such intervention remains difficult because the expanding tourism infrastructure is primarily built on privately-held lands in the villages of Dhikuli and Garjia (see Figs. 1 and 2), while few studies have examined the impacts and potential policy options available to government from a community perspective.

Focusing on the rapid tiger-related tourism development occurring in the village of Dhikuli as a case study, this paper seeks to: a) quantify the land-use change that has occurred; and b) assess the impact of this change on village structure, solidarity and institutions with a view to informing future research and policy.

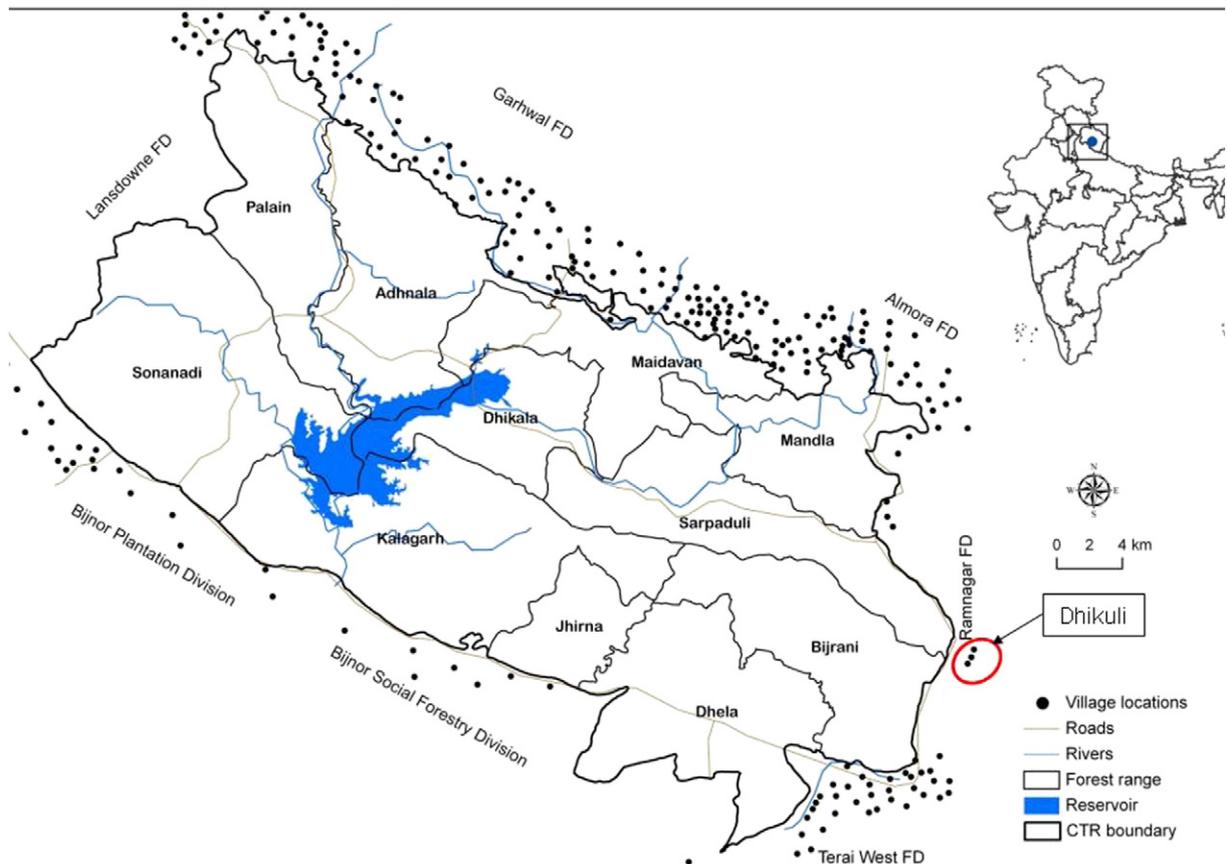
## 2. Methods

In order to explore the social–ecological impacts of wildlife tourism in CTR, we utilized a mixed methods approach which drew on both qualitative and quantitative methods to enhance, triangulate and develop our findings [following the recommendations of Creswell and Clark (2011)].

Overall data collection and analysis were guided by a combined grounded theory–case study research design (Creswell, 2009; Glaser and Strauss, 1967; Stoll-Kleemann, 2001). Grounded theory enabled us to take an exploratory approach based on an inductive research strategy, where the processes of data collection and analysis were simultaneous and recursive (Glaser and Strauss, 1967; Locke, 2001). Here, initial data were collected and analyzed, providing preliminary results and new questions which were then used to refine the research design and guide further data collection (Charmaz, 2006; Denzin and Lincoln, 2005). The case study method allowed us to examine contemporary phenomena that were not readily distinguishable from context using multiple sources of evidence (Creswell, 2009; Yin, 2009).

### 2.1. Dhikuli village, Corbett Tiger Reserve, India

CTR and Ramnagar Forest Division lie on either side of the Kosi River, forming a contiguous ecosystem for tiger populations, and a significant component of the Terai Arc Landscape (Jhala et al., 2011b). These two



**Fig. 1.** Map of Corbett Tiger Reserve, showing the boundaries of the reserve, major forest divisions, rivers and roads. River Kosi and Ramnagar Forest Division are located to the east of CTR. Dhikuli is the central of the three villages encircled.

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