# Tourism's Impact on the Risk Management and Coping Capacity of Rural Communities in Nepal

Martina Shakya

Institute of Development Research and Development Policy, Ruhr University Bochum, Germany - martina.shakya@rub.de

Abstract: In the spatial context of remote, rural areas in developing countries, tourism creates both livelihood risks and opportunities for local residents. This paper presents empirical evidence from a study in Nepal that analyzes the causal links between tourism and vulnerability to poverty. The paper draws on village case studies and comparative analysis of household data from tourism and non-tourism communities. Tourism has considerably transformed the society and economy of Nepal's rural tourism destinations in the past decades. The recent fluctuations of tourist arrivals at Chitwan National Park and Langtang National Park demonstrate that tourism exposes rural residents to the risk of income shocks. At the same time, tourism improves the risk management capacity of rural households by diversifying their livelihoods. Moreover, the analysis shows a clear positive impact of tourism on households' coping capacity, measured in terms of material and non-material assets that are vital to respond to shocks. Taking into account rural residents' perceptions of tourism and risk, it is concluded that the risk of income shocks is more than compensated by the better risk management and coping capacity of tourism households. This explains why tourism is a preferred livelihood option in the notoriously risky environment of rural Nepal.

**Keywords:** Tourism, rural development, vulnerability analysis, risk, Nepal, Langtang National Park, Chitwan National Park.

#### Introduction

Despite the international financial crisis, tourism has remained one of the largest and fastest growing sectors of the world economy. Growth of tourism has been particularly dynamic in developing countries, which currently hold a 45% market share of global tourist arrivals (UNWTO, 2009). With only about 1%, however, the share of the world's 50 Least Developed Countries (LDCs) has remained stunningly low (UNWTO, 2007; estimate for 2005). A landlocked, remote country such as Nepal has much to gain from diversifying its agriculture-dependent economy by harnessing tourism for the development of its rural areas. Despite a growing body of case studies, however, evidence on tourism's developmental impacts is still piecemeal (Mitchell/Ashley, 2007). Moreover, little is known about the impact of demand fluctuations on tourism destinations in developing countries, as the aspect of risk has been strikingly neglected by conventional research on tourism and development. While tourism is commonly perceived as an economic opportunity, it could also render households vulnerable to a range of unwanted side-effects, especially on the local society and the environment. (Wall/Mathieson, 2006). It is therefore hypothesized in this paper that tourism has an impact on the vulnerability of rural households and communities in Nepal (Shakya, 2009).

#### The concept of vulnerability

Although vulnerability is not a new concept or paradigm in development research, it is increasingly being used in the international policy arena in relation to topics as diverse as economic globalization, food security, natural hazard risk, climate change and international terrorism (cf. Alwang et al., 2001). The analysis of the vulnerability literature reveals that vulnerability and poverty are distinct, but related concepts (Chambers, 1989; Wisner et al., 2004; Hoddinott/Quisumbing, 2003): While poverty can be measured on the basis of material and non-material outcome indicators of human well-being, vulnerability refers to the *threat of poverty*, i.e. the susceptibility of individuals or

households to fall into or to remain at a standard of welfare that is below a socially-accepted minimum level. *Risk*, most often defined in its negative sense (i.e. the probability of harmful events), is an essential element of vulnerability and the main variable that distinguishes poverty and vulnerability (Shakya, 2009). Whereas poverty analysis aims at identifying who is poor at present, vulnerability analysis goes one step further by asking who is likely to fall into or to remain in poverty in the future. Thus, vulnerability analysis is important from a policy point of view, especially for planning development interventions in fields such as social risk management, disaster risk management and climate change adaptation (Watts/Bohle, 1993; cf. DFID, 2006; GTZ, 2005; UNDP, 2004a).

#### Analytical framework and research design

To translate a socially constructed and context-dependant concept into empirically feasible indicators, vulnerability was disaggregated into three analytical dimensions: Risk exposure, risk management capacity and coping capacity. *Risk exposure* refers to households' experience of shocks (Holzmann/Jørgensen, 2000; Heitzmann et al., 2002). *Shocks* are defined as sudden, unanticipated events with an immediate, adverse impact on households' welfare. Natural hazards, demand shocks, violence, disease and death are typical examples of shock events. Shocks are principally beyond the control of individuals and communities. Risk exposure is therefore commonly conceptualized as the "external side" of vulnerability (cf. Chambers, 1989). However, the "realist" concept of *risk*, i.e. the notion of risk as objectively existing and "calculable" in terms of probabilities, is of little practical value for vulnerability analysis. This is because risk—like vulnerability—is a socially constructed concept that has to be defined in the individual context of a society and its geographical setting (Shakya, 2009; cf. Lupton, 1999). In addition to recording the occurrence of commonly reported risk-related events in a specified period, it therefore seemed appropriate to explore what rural communities and households themselves consider as hazards and risks in their particular local context.

Vulnerability also has an "internal side" that depends on human agency and decision-making, risk perception and structural determinants, e.g. people's political, socio-economic and ecological environment (cf. Chambers, 1989; Wisner et al., 2004). Sensitivity, i.e. the potential impact of shocks, refers to people's capacity to anticipate, prevent, mitigate or cope with the consequences of harmful events. Sensitivity was disaggregated into two distinct variables, i.e. risk management and coping capacity. Risk management refers to the strategy of households to "anticipate failures in individual income streams by maintaining a spread of activities" (Ellis, 1998). Risk management can thus be interpreted as ex-ante income management under conditions of risk and uncertainty. Livelihood diversity, i.e. the variety of different income sources within a household, was therefore selected as a proxy for risk management (cf. Ellis, 2000).

While risk exposure and risk management capacity are both linked to uncertainty, *coping capacity* refers to people's ability to overcome the consequences of negative shocks once these have materialized. The need to cope with a shock is therefore not linked to risk, but reflects a status of certainty (cf. Ellis, 1998). Coping capacity is a function of households' asset holdings. Apart from being "mainstream" indicators of household welfare, assets (or capitals) are suitable proxies to assess a household's capacity to cope with contingencies such as natural hazards or income shocks (cf. Swift, 1989; Scoones, 1998). Assets can be transformed into production inputs or into consumption and thus attenuate the consequences of shocks and temporary consumption shortages. Besides natural, physical and financial assets, human capital (labor, education) and social capital (membership in networks and institutions) are increasingly examined in vulnerability analyses. While not being productive assets by themselves, human capital and social capital also contribute to enhancing economic options of households.

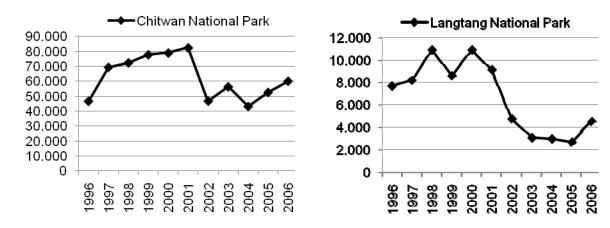
Due to the contextual character of vulnerability and risk, the selected indicators for risk exposure, risk management and coping capacity reflect the socio-economic and geographical environment of Nepal's rural areas. A comparative, multi-level and multi-method research design was chosen to

identify the impact of tourism on the risk exposure, risk management and coping capacity of rural households and communities. Quantitative data from 259 households were collected in four villages in 2006 and analyzed by regressions, correlations and statistical tests. The results were cross-validated with findings from community case studies of the same villages that were based on group discussions and other participatory appraisal tools. A quasi-experimental research design was chosen to compare a "treatment group" of households that are economically involved in tourism—e.g. as lodge/hotel owners, restaurant owners, hotel employees, guides or porters—with a matching control group of non-tourism households. Causal connections between tourism and vulnerability could thus be detected. Furthermore, the distinction between households in the hills/mountains (Rasuwa district) and in the lowlands (Chitwan district) enabled us to assess the impact of geographical location (see Shakya, 2009 for details on the methodology).

# **Geographical context**

The Federal Democratic Republic of Nepal, a least developed country with considerable tourism potential, was chosen as the geographical setting of the research. With its focus on trekking tours, mountaineering and wildlife excursions, the tourism industry in Nepal is strongly associated with rural-based tourism products. The "People's War," an armed conflict that cost the lives of more than 13,000 people between 1996 and 2006, was chosen as the temporal reference of this study. During this period, the Nepalese tourism industry suffered from pronounced tourism demand fluctuations, even if the "People's War" was only one among several national and international causes for the temporary decline of international tourist arrivals.

With a GDP share of 3% (2007) tourism's importance for the national economy is not very high. It nonetheless plays a significant role in the local economy of Nepal's rural tourist destinations. It was therefore assumed that declines of up to 50% in the number of international tourist arrivals at Langtang National Park and Chitwan National Park, two of Nepal's most important tourist destinations, must have had tangible negative consequences at the local level (Fig. 1). Chitwan district and Rasuwa district (Langtang National Park) were thus chosen for a study of the impact of tourism demand fluctuations at the local level. These two districts represent different topographical and ecological zones of Nepal, namely the lowlands (Chitwan) and the hills and mountains (Rasuwa). Both districts belong to Nepal's Central Development Region. Together, the districts cover altitudes from 110 to 7245 m, representing a considerable range of Nepal's topographical, ecological and socio-cultural diversity (MCTCA/UNDP/TRPAP, 2005, 2006).



**Figure 1.** Foreign tourist arrivals at Chitwan National Park and Langtang National Park, Nepal, 1996-2006 (data source: Ministry of Culture, Tourism and Civil Aviation, various years).

Rasuwa district shares its northern border with China's Tibetan Autonomous Region. Officially part of Nepal's mountain belt, the district covers both middle hill and high mountain areas. More than 67% of the area is higher than 3000 m, explaining the district's small (7%) share of arable land (NIDI,

2006). The scarcely populated district scores worse than Chitwan and the country average in regard to socio-economic indicators such as literacy rate and life expectancy (UNDP, 2004b). It is also poorly developed in terms of physical and socio-economic infrastructure. With its rugged mountain topography and constrained accessibility, Rasuwa district is appropriately described as remote. Due to a lack of access to non-farm income opportunities, 90% of the district population is involved in farming.

Langtang National Park was established in 1976 as the first national park in the mountains of Nepal. It has a total area of 1808 km² and covers 65% of the district's surface area. A buffer zone was declared in 1998 and comprises the 45 indigenous settlements that are located inside the national park. The declaration of the national park and increasing numbers of foreign trekking tourists have created economic opportunities for the villages and hamlets along popular trekking routes such as the Langtang Valley Trek and the Helambu-Gosainkunda trekking routes. Today, the Langtang area is the third important destination for trekking and mountaineering tourism in Nepal. It received 4562 foreign tourists in 2006 (MCTCA, 2006).

Chitwan district is classified as part of Nepal's tarai (lowland) belt. However, 20% of the surface area is above 500 m and the highest elevation above 1000 m. Due to the predominantly flat topography, 25% of the area is arable land, and conditions for farming are comparatively favorable in Chitwan (NIDI, 2006). Since a campaign for the eradication of Malaria in the 1960s and the clearing of tarai forests, the district has attracted in-migration from Nepal's hilly regions and is now densely populated. While land has become a scarce resource, the district is well-endowed with physical and socio-economic infrastructure and easily accessible by road and air transport. Although 80% of the population is involved in farming, the district's settlements offer many non-farm employment opportunities as well. Non-farm activities are typically pursued in addition to farming.

Chitwan National Park was established in 1973 as the first national park of Nepal to protect rare species like the Bengal tiger and the Indian rhinoceros from extinction. The former hunting reserve of the Nepalese royalty was declared a UNESCO World Heritage Site in 1984. It has a total size of 1182 km², covering 43% of Chitwan district and portions of three adjoining districts (MCTCA/UNDP/TRPAP, 2006). There are no settlements inside the park. A buffer zone has been declared in 1997 for the 223,000 people who live in the peripheral areas of the national park (DNPWC, 2000). The opening of the first commercial safari lodge in 1964 was the birth hour of tourism in the district (cf. Mishra/Jefferies, 1991). After the establishment of the national park, more lodges were opened inside the park under government concessions. A few adjoining communities in the buffer zone have developed into tourist resorts since the 1970s and offer a wide range of facilities and services for tourists. Even outside the tourist resorts, tourism has stimulated the local economy of the district by creating employment and opportunities for trade. Chitwan National Park is the most frequently visited national park in Nepal and received more than 60,000 foreign tourists in 2006 (MCTCA, 2006).

# Tourism and risk exposure

Almost all households in the survey sample depend on farming to secure their livelihood. This makes them vulnerable to natural hazard shocks such as landslides, flooding and drought, which are very common in rural Nepal. Income shocks, however, were reported more frequently among the tourism households as compared to the non-tourism households. A chi-square test (significance level: 5%) confirms the claim that the risk of income shocks is significantly higher for households involved in tourism (Table 1).

It was therefore somewhat surprising that the overwhelming majority of tourism households reported a notable improvement of their personal situation in the reference period 1996-2006—for instance in terms of their financial, health and educational situation. Almost all of the tourism households attributed these improvements to tourism. A statistical test also confirmed a positive connection between households' tourism involvement and their food security. In contrast, many

non-tourism households had observed a stagnation or deterioration during the "People's War" (Table 2).

**Table 1.** Experience of economic shocks, 1996-2006 (% of households).

	Tourism households (n = 107)	Non-tourism households (n = 152)	All (n = 259)
Experienced at least one economic shock	46	34	39
Experienced no economic shock	54	66	61
Total:	100	100	100

Chi-square test: U = 3.970; p = 0.046. The test is valid (0 cells have an expected count < 5).

Source: Shakya, 2009.

Table 2. Assessment of development trends in four Nepalese communities, 1996-2006 (% of households).

Assessment:	Households in mountain communities (n=121)	Households in lowland communities (n=136)	Households in tourism communities (n=127)	Households in non-tourism communities (n=130)	Total sample (n=257)
No or little improvements	21	7	6	23	14
Some improvements	18	12	18	13	15
Many improvements	31	18	23	28	24
Improvements in almost all respects	31	63	53	37	47
Total:	100	100	100	100	100

Source: Shakya, 2009.

The sub-samples of the four case study villages roughly mirror the results for the aggregate sample, but also reveal location-specific differences in regard to risk exposure: In both ecological belts of Nepal, relatively more households in the tourism communities had felt improvements of their living conditions than households in non-tourism communities *despite* the demand fluctuations during the "People's War." In addition, both the tourism and the non-tourism villages in the Nepalese lowlands had fared considerably better than the two mountain communities between 1996 and 2006. They not only faced less income shocks but also assessed the development of their personal situation in the observation period more favorably (Fig. 2). As will be further elaborated in the following paragraphs, this result is causally linked to the better risk management and coping capacity of lowland communities in general.

# **Local Perceptions of Risk**

As noted above, people assess risk in relation to their personal situation and livelihood context. While outside observers might perceive the years of the "People's War" as a very insecure period, residents of Nepal's rural areas have noted many positive trends, e.g. the expansion of physical infrastructure. In contrast, notorious risk factors in Nepal's remote areas, e.g. the risk of diseases and death, are perceived as part of "normal life." Such individual shocks were thus seldom reported by the households in the survey sample.

To analyze households' risk perception in more detail, we asked the survey respondents to assess the riskiness of tourism relative to farming and conducted another statistical test (Table 3). While the majority of tourism households consider tourism as more risky than farming, almost the same percentage of the non-tourism households thinks that farming is either more risky or equally risky than tourism. Thus, all households obviously prefer economic options that they consider as risky!

To further explore this finding, non-tourism households were asked about their reasons for not being involved in tourism. Interestingly, the perception of tourism as being risky was only mentioned by a minority of respondents (16%). It rather is the lack of skills, money and labor that keeps households from getting involved in tourism.

**Table 3.** Risk perception of tourism versus farming (% of households).

"Tourism is more risky than farming"	Tourism households (n = 107)	Non-tourism households (n = 152)	All (n = 259)
Yes	60	41	49
No	40	59	51
Total:	100	100	100

Chi-square test: U = 8.475; p = 0.004 (significance level:  $p \le 0.05$ ). The test is valid (0 cells have an expected count < 5).

Source: Shakya, 2009.

Finally, the tourism households were asked to assess the profitability of tourism versus farming. A stunning 91% thought that tourism was more profitable than farming, suggesting that profitability was a more important concern than risk in the choice of livelihood options (cf. Table 3). These findings suggest that poor people are not "risk averse" per se, as has been claimed in the literature (Morduch, 1995). Rather, it is the *expected utility* of different activities and the perception of households' individual options and constraints that determines their economic decisions (cf. Fafchamps, 2003; Binswanger, 1980). The non-tourism households in the sample have thus stayed in farming not because they considered tourism as risky but because of perceived constraints that kept them from engaging in tourism.

# Tourism and risk management

As risk and uncertainty are normal conditions of life in rural Nepal, households try to spread risk by securing their livelihoods from different occupations and income sources. Livelihood diversification is particularly important in the context of remote, rural areas that offer very limited alternatives to farming. Becoming economically involved in tourism can thus be considered as a strategy to manage risk, if it leads to greater livelihood diversity.

**Table 4.** Tourism and livelihood diversity (% of households).

	, , , , , , , , , , , , , , , , , , , ,		
Total no. of economic activities in the household:	Tourism households (n = 107)	Non-tourism households (n = 152)	All (n = 259)
1 activity	12	45	31
2 activities	49	47	48
3 activities	27	7	15
4 activities or more	12	1	6
Total:	100	100	100

Chi-square test: U = 50.142, p = 0.000; the test is valid (0 cells have an expected count < 5).

Source: Shakya, 2009.

The household data from Chitwan and Rasuwa district show that tourism-related occupations are most often pursued in addition to farming. A chi-square test confirms this connection between tourism and livelihood diversity as statistically significant (Table 4). Moreover, the share of tourism-related cash income correlates positively with households' degree of economic diversification. In contrast, a high share of farm-related income is associated with a low level of livelihood diversification. It can thus be deduced that tourism increases the ability of households to manage risk.

Multiple regression analysis reveals that livelihood diversity and households' share of non-farm income not only depends on tourism, but also on geographical location. The partial beta coefficients suggest that not only tourism households but also households in the lowland district of Chitwan tend to have more diversified livelihoods and a higher share of non-farm income than non-tourism households and households in the mountains of Rasuwa district. The determination coefficients for the regressions suggest that tourism involvement and location can explain 27% and 23% respectively of the variation for the two dependent variables (Table 5).

Table 5. Multiple regression analysis of the impact of tourism and geographical location on livelihood diversity (n = 259).

	Dependent variable:		
Independent variables:	No. of economic activities	Share of non-farm income (%)	
Tourism (0 = non-tourism households; 1 = tourism households); $beta_1$ (standardized)	0.384**	0.252**	
Geography (0 = Rasuwa; 1 = Chitwan); beta <sub>2</sub> (standardized)	0.302**	0.377**	
r	0.528**	0.488**	
r² (adjusted)	0.273	0.232	

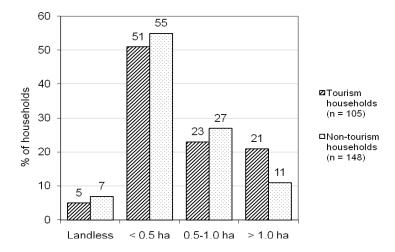
<sup>\*\*</sup> Significance (2-tailed): p = 0.001.

Source: Shakya, 2009.

The empirical results confirm that tourism households in the case study communities seldom engage in tourism as their only livelihood option. Instead, tourism is generally pursued as an additional option and thus serves to diversify livelihood portfolios in the risky context of Nepal's rural areas. Moreover, livelihood diversity also depends on a range of other factors that are related to geographical location. Consequently, the two case study communities in Chitwan district have more diversified livelihoods than the two villages in the mountains.

### **Tourism and coping capacity**

In addition to scrutinizing tourism's impact on risk exposure and risk management, the study also looked at the connection between tourism and various indicators of households' assets. As most households depend on farming in one way or the other, *land* remains one of the most important productive resources in rural Nepal and is a key indicator of *natural capital*. With an average size of less than 0.5 hectares, landholdings in rural Nepal are highly fragmented (World Bank, 2006). Figure 2 suggests that the tourism households in the survey sample had a relatively greater share of landholdings that were larger than one hectare. However, this result is not significant statistically.



**Figure 2.** Tourism involvement and landholding classes (maximum landholding in the sample: 2.54 ha). Source: Shakya, 2009.

There is hardly any doubt among scholars that tourism contributes to the generation of income and, through accumulation of savings, to the formation of *financial capital*. The survey data confirm this positive impact of tourism, but the socio-cultural, environmental and educational impacts of tourism in developing countries have been a matter of controversy. For instance, it has been argued that most jobs in the tourist industry are unskilled and do not offer any prospects of upward economic mobility (cf. GTZ, 2007). However, the data from Chitwan and Rasuwa clearly indicate a positive, statistically significant impact of tourism on *human capital*, measured in terms of household size and education level. As shown in Table 6, the tourism households in the sample have attained higher levels of secondary and tertiary education than the non-tourism households. Considering the fact that educational attainment, income and expenditures correlate positively in the context of Nepal (World Bank, 2006), this result suggests a close connection between different types of assets.

Table 6. Highest educational attainment in the household (% of households).

Educational attainment:	Tourism households (n = 107)	Non-tourism households (n = 151)	All (n = 258):
Never attended school	6	11	9
Primary (grade 1-5)	17	34	27
Lower secondary (grade 6-7)	13	12	12
Secondary (grade 8-10)	29	23	25
Secondary with School Leaving Certificate (SLC)	7	5	6
Higher secondary (grade 11-12)	18	9	13
Tertiary education	11	5	8
Total:	100	100	100

Chi-square test: U = 17.029, p = 0.009; the test is valid (0 cells have an expected count < 5).

Source: Shakya, 2009.

Apart from revealing further positive impacts of tourism on natural, financial and physical assets of households, the analysis also identified a strong influence of the geographical location on many asset variables: Inhabitants of Chitwan district in the lowlands have access to financial institutions more easily, more non-farm employment opportunities, access to better education, health care and other physical and socio-economic infrastructure than the people in the hilly district of Rasuwa. Considering the contrasting topographical situation of the two case study districts, these results are not surprising. They underline a relative advantage of tourism particularly for the regional development of Nepal's remote mountain areas: While trade and manufacturing would not be

feasible in such areas due to the lack of infrastructure, tourism is still possible even in peripheral and relatively inaccessible areas.

## Tourism and aggregate vulnerability

In addition to analyzing the impact of tourism on households' risk exposure, risk management and coping capacity in separate, we also intended to determine the relative degree of "aggregate vulnerability" for each case study village and for each sample household. First, relative vulnerability ranks were determined for the four *communities*, based on the village sub-samples of the household data. Towards this end, "vulnerability scores" for selected core indicators were determined for each variable of vulnerability, i.e. risk exposure, risk management and coping capacity. The three variables were equally weighted, and the resulting scores were aggregated and normalized. Each village thus got a score and a corresponding rank of vulnerability. According to this village ranking, the nontourism community in Chitwan district (lowlands) is the least vulnerable of the four case study villages. It is closely followed by the tourism village in Chitwan. The two communities in Rasuwa district follow at a notable distance on ranks three and four.

The most striking result of the village ranking is the significantly higher vulnerability of the two remote mountain communities relative to the lowland communities. Considering the lack of infrastructure and the remoteness of Nepal's mountain regions as opposed to the variety of risk management and coping opportunities in the *tarai*, these results are not surprising. Moreover, the non-tourism village in Rasuwa is clearly more vulnerable than the tourism village in the same district. Quite interestingly, however, the non-tourism community in Chitwan scored better than the tourism community in the same district in terms of vulnerability. Even if the advance of the non-tourism village is quite narrow and should not be overvalued, this result invites the following interpretation: In regions with a relatively low "entry vulnerability" as in the Nepalese lowland district, tourism imposes a level of risk that is higher in relation to the additional utility that it creates. In such a context, households may thus opt for less risky and perhaps equally profitable opportunities rather than for tourism.

To establish the aggregate vulnerability level of individual *households*, a vulnerability index was constructed from 15 equally weighted and dummy-coded variables from across all three dimensions of vulnerability. Values for each variable were added up and normalized. Thus, each household in the aggregate sample received a vulnerability score ranging from 0-1 and a corresponding vulnerability rank. The resulting variable is near-normally distributed and was regressed against a number of indicators. The analysis shows that the most vulnerable households in the sample are typically those residing in the mountains, with a low degree of livelihood diversity, a low level of education, a small household size, a small proportion of non-farm income, a low level of absolute cash income and with small landholdings.

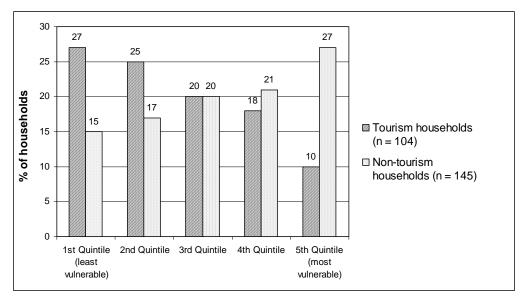


Figure 3. Attribuation of fourism and non-tourism households to vulnerability quintiles. Source: Shaya, 2009.

The cross-tabulation of tourism and non-tourism households across classes of vulnerability scores shows a causal connection between tourism involvement and vulnerability, which is statistically significant. It suggests that the tourism households in the sample are less vulnerable than the non-tourism households. Finally, the distribution of tourism and non-tourism households across "vulnerability quintiles" was examined in line with the common distinction of income or consumption quintiles in conventional poverty analyses. Figure 3 shows the decreasing number of tourism households from the least vulnerable to the most vulnerable quintile, while the opposite applies to non-tourism households.

#### **Conclusion**

It has been shown in this paper that as an economic strategy within a diversified income portfolio, tourism clearly reduces the threat of poverty among rural households in Nepal. This even applies in the context of rural tourism destinations that suffered from strong demand fluctuations and resulting income shocks, as in the case of Nepal's Rasuwa district and Chitwan district in the period between 1996 and 2006. It is hoped that policy makers and scholars take notice of the considerable potential of tourism for rural development, especially in the context of remote areas of developing countries. Many developing countries possess outstanding tourist attractions but are in dire need of know-how, investment and access to international tourist markets to exploit their tourism potential. Even if tourism is not feasible everywhere, its potential for regional rural development deserves a reappraisal not only with regard to poverty alleviation, but also under aspects of risk and vulnerability.

#### References

Alwang, J., Siegel, P. and S. Jørgensen (2001) Vulnerability: A View from Different Disciplines. *World Bank Social Protection Discussion Paper 0115*. Washington.

Binswanger, H. (1980) Attitudes toward Risk: Experimental Measurement in Rural India. *American Journal of Agricultural Economics* 62 (3): 395-407.

Chambers, R. (1989) Vulnerability, coping and policy. IDS Bulletin 20 (2): 1-7.

DFID (UK Department for International Development, (2006) Reducing the Risk of Disasters – Helping to achieve Sustainable Poverty Reduction in a Vulnerable World: A Policy Paper. London.

- DNPWC (Department of National Parks and Wildlife Conservation, 2000) Royal Chitwan National Park and Buffer Zone. Management Plan (2001-2005). Kathmandu.
- Ellis, F. (1998) Household Strategies and Rural Livelihood Diversification. Survey Article. *Journal of Development Studies* 35 (1): 1-38.
- Ellis, F. (2000) Rural Livelihoods and Diversity in Developing Countries. Oxford/New York.
- Fafchamps, M. (2003) Rural Poverty, Risk and Development. Cheltenham, Northampton: Elgar.
- GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit, 2005) Linking Poverty Reduction and Disaster Risk Management. Eschborn.
- GTZ (2007) Tourismus als Handlungsfeld der deutschen Entwicklungszusammenarbeit. Grundlagen, Handlungsbedarf und Strategieempfehlungen. Eschborn.
- Holzmann, R. and S. Jørgensen (2000) Social Risk Management: A new conceptual framework for Social Protection and beyond. *World Bank Social Protection Discussion Paper 0006*. Washington.
- Heitzmann, K., Canagarajah, R. and P. Siegel (2002) Guidelines for Assessing the Sources of Risk and Vulnerability. *World Bank Social Protection Discussion Paper 0218*. Washington.
- Hoddinott, J. and A. Quisumbing (2003a) Methods for Microeconometric Risk and Vulnerability Assessments. World Bank Social Protection Discussion Paper Series 0324. Washington.
- Lupton, D. (1999) Risk. New York.
- MCTCA (Ministry of Culture, Tourism and Civil Aviation, various years) Annual Statistical Report. Kathmandu.
- MCTCA/UNDP/TRPAP (Tourism for Rural Poverty Alleviation Programme) (2005) Tourism Resource Mapping Profile. Rasuwa District. Kathmandu.
- MCTCA/UNDP/TRPAP (2006) Tourism Resource Mapping Profile. Chitwan District. Kathmandu.
- Mishra, H. and M. Jefferies (1991) Royal Chitwan National Park. Wildlife Heritage of Nepal. Kathmandu.
- Mitchell, J. and C. Ashley (2007a) Can tourism offer pro-poor pathways to prosperity? *ODI Briefing Paper 22*, June 2007. London.
- Morduch, J. (1995) Income Smoothing and Consumption Smoothing. *Journal of Economic Perspectives* 9 (3): 103-114.
- NIDI (Nepal Development Information Institute) (2006): Nepal District Profile 2006. Kathmandu.
- Scoones, I. (1998) Sustainable Rural Livelihoods. A Framework for Analysis. IDS Working Paper 72. Brighton.
- Shakya, M. (2009) Risk, vulnerability and tourism in developing countries: The case of Nepal. *Bochum Studies in International Development 56*. Berlin
- Swift, J. (1989) Why are rural people vulnerable to famine? IDS Bulletin Vol. 20, No. 2, pp. 8-15.
- UNDP (United Nations Development Program, 2004a) Reducing Disaster Risk: A Challenge for Development. A Global Report. New York.
- UNDP (2004b) Nepal Human Development Report 2004. Kathmandu.
- UNWTO (World Tourism Organization, 2007) Tourism and Least Developed Countries. A Sustainable Opportunity to Reduce Poverty. http://www.unwto.org/sustainable/doc/tourism-and-ldc.pdf (accessed 03-12-2007).
- UNWTO (2009) Tourism Highlights. 2009 Edition. Madrid. http://www.unwto.org/facts/eng/pdf/highlights/UNWTO Highlights09 en HR.pdf (accessed: 02-11-2009).
- Wall, G. and A. Mathieson (2006) Tourism: change, impacts and opportunities. Harlow.
- Watts, M. and H.-G. Bohle (1993) Hunger, Famine and the Space of Vulnerability. GeoJournal 30 (1): 117-125.
- Wisner, B., Blaikie, P., Cannon, T. and I. Davis (2004) At Risk. Natural Hazards, People's Vulnerability and Disasters. Second Edition. London.
- World Bank (2006) Nepal: Resilience Amidst Conflict. An Assessment of Poverty in Nepal, 1995-96 and 2003-2004. Washington: The World Bank.