

On the Road to Development: The Impacts of Road Construction on Livelihoods in Manang

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Abstract

Development has been and continues to be the top priority of many states in the Global South. Especially in rural areas, road connection is regarded as a vital step towards economic advancement and poverty alleviation both by the donor agencies and the recipient states. In scientific literature, doubt is casted on the direct connectivity of rural road construction and development. Numerous case studies indicate that the accruing effects are not necessarily positive, but rather either minimal or even adverse.

The global trend of infrastructure expansion is prominent in Nepal, where the government is aiming to connect remote mountain regions with the national road network. The present thesis focuses on the impacts of the Chame-Kangsar road on the livelihoods of different social groups in the Marsyangdi valley and specifically, the village of Manang. Further interest lies on the political and institutional backgrounds, environmental effects, and the consequences for trekking tourism in the region. To gain greater insight regarding the aforementioned concerns, semi-structured interviews, participant observation in field, a thematic mapping and a household survey were conducted.

The results show that generally valid, universal statements on the impacts cannot be made. Firstly, the impacts vary greatly between villages due to their location in the region and the associated role in the tourism system. Secondly, the results of the Manang village case study show that the economic opportunities and benefits facilitated by the road are unevenly distributed within the community as well. The tourism sector in Manang is profiting from, and adapting to increased arrival numbers and a prolonged length of stay, while the lower parts of the region suffer from a significant loss of business. According to the government agencies and the project donors, low socioeconomic populations are expected to benefit the most from the road. Within Manang however, the livelihood strategies of these populations remain relatively unaffected. Therefore, it is concluded that building roads is not sufficient.

This study increases the understanding of the impacts of rural road construction in Nepal. The findings implicate that complementary measures should be taken to enhance widespread benefits for low socioeconomic populations.

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Table of contents

1. Introduction	1
1.1 Statement of the problem	2
1.2 An introduction to Nepal, Manang and the studied road.....	4
1.3 Objective and research question	6
1.4 Thesis Structure	7
2. Theory, concepts and frameworks	9
2.1 History of development.....	9
2.1.1 From “civilization” to “development”	9
2.1.2. Post-war decades	10
2.1.2 Dependency theory.....	12
2.1.3 Theories of middle range	12
2.1.4 Development crisis and neoliberalization	13
2.1.5 Sustainable development.....	14
2.1.6 From MDGs to SDGs.....	16
2.1.7 Conclusion	18
2.2 Rural road construction, development and poverty	19

2.2.1	The development-road construction nexus over time	19
2.3	Road construction and development in Nepal	23
2.3.1	History	23
2.3.2	Rural road's impacts	32
2.4	Roads as coupled social and ecological systems.....	37
2.5	Rural roads and livelihoods	41
3.	Methodology	47
3.1	Research approach	49
3.2	Kathmandu and Pokhara	50
3.2.1	Interviews: sampling, design and practice	51
3.2.2	Secondary data collection	53
3.3	From Besisahar to Manang	53
3.4	Manang village	54
3.4.1	Participant observation	55
3.4.2	Interviews and mapping	56
3.4.3	Questionnaire survey	57
3.5	Role of the researcher and ethical considerations.....	60
3.6	Language & Translation	61

3.7	Limitations and comprises during fieldwork	62
4.	The study area	63
4.1	Geographical setting.....	66
4.2	Evolvement of different livelihood strategies	68
4.2.1	Agro-pastoralism.....	69
4.2.2	Trade and outmigration.....	69
4.2.3	Tourism.....	72
4.2.4	Recapitulation	76
4.3	Road construction on the ACT	77
4.3.1	Historical sequel of road construction in the region.....	77
4.3.2	The Chame-Kangsar road.....	78
4.3.3	Rationales.....	80
4.4	Summary.....	81
5.	Results.....	83
5.1	Introducing the road: condition and operation	84
5.2	The broad picture: Who, Why, How.....	87
5.2.1	Political enforcement.....	87
5.2.2	Role of ACAP.....	90

5.2.3	Tourism associations	92
5.3	Impacts on tourism	93
5.3.1	Arrival numbers.....	94
5.3.2	Changing tourism and visitor structure.....	95
5.3.3	Tourism in the lower parts.....	97
5.4	Case study: Manang.....	97
5.4.1	General impacts and impressions.....	99
5.4.2	Tourism actors	102
5.4.3	Non-tourism actors.....	105
6.	Discussion of the results	110
6.1	Research questions.....	110
6.2	Limitations of the study.....	120
6.3	Recommendations for future research	120
7.	Conclusion	122
7.1	Implications for practice.....	124
8.	Bibliography	125
Annex	148

List of acronyms

ACA Annapurna Conservation Area

ACAP Annapurna Conservation Area Project

ACT Annapurna Circuit Trek

ADB Asian Development Bank

DDC District Development Committee

DFID Department for International Development

GDP Gross Domestic Product

GoN Government of Nepal

HDI Human Development Index

ICIMOD International Centre for Integrated Mountain Development

IMF International Monetary Fund

IRDP Integrated Rural Development Programme

LRN Local Road Network

MDG Millennium Development Goal

NGO Non-Governmental Organisation

NPR Nepalese Rupee

NTFP Non-timber forest product

NTNC National Trust for Nature Conservation

NRN National Road Network

OFID OPEC Fund for International Development

OPEC Organization of the Petroleum Exporting Countries

RRRSDP Rural Reconstruction and Rehabilitation Sector Development Program

SDC Swiss Development Cooperation

SDG Sustainable Development Goal

SLA Sustainable Livelihood Approach

SRN Strategic Road Network

UMHP Upper Marsyangdi Hydropower Project

UN United Nations

VDC Village Development Committee

List of Tables

Table 1: Overview of vulnerability factors. Based on Cahn, 2002; DFID, 1999a; Hussein, 2002..... 45

Table 2: Itinerary of the field trip 47

Table 3: List of interview partners in Kathmandu and Pokhara..... 52

Table 4: Population, ethnic groups and religion in the study area. Data compiled from CBS, 2014c; CBS, 2014a; CBS, 2014b. 65

Table 5: Tourists by nationality in Manang. Based on ACAPs local office in Manang, cited in Subedi & Chapagain, 2011. 75

Table 6: Basic information on Nyishang road construction project. Based on Government of Nepal, 2010..... 79

Table 7: Overview of expected positive impacts of the Nyishang road. Based on Government of Nepal, 2010..... 80

Table 8: Overview of expected negative impacts of the Nyishang road. Based on Government of Nepal, 2010..... 81

Table 9: Encoded categories of respondents 84

Table 10: Tourists in ACA by nationality 2017. Based on Royal Mountain, 2018. 96

Table 11: Amenities and services offered by hotels in Manang..... 103

List of figures

Figure 1: Rostow’s model of development: the stages of economic growth. 11

Figure 2: The three dimensions of sustainability..... 15

Figure 3: Iconic photo of porters carrying a Daimler across a river on the way to Kathmandu. 24

Figure 4: The total length of the National Road Network (NRN) from 1956 to 2015. 29

Figure 5 Total length of LRN in different geographic regions of Nepal.. 31

Figure 6: Length and percentage of different road surface types in the mountain region..... 32

Figure 7: Three different ways of conceptualizing the human-nature relationship... 40

Figure 8: The pentagon of capitals/assets in the SLA.. 42

Figure 9: The livelihood framework..... 44

Figure 10: Impressions from the fieldwork. (1) Interviewed woman and her house in Manang; (2) The author and two interview partners; (3) Jeeps on the way to Manang; (4) Respondent and the translator in a Manang household. 48

Figure 11: The road at the border of Lamjung and Manang district with improvised wooden bridge over the Myardi Khola. 54

Figure 12: Peasant woman in Khangsar in front of her field of Buckwheat..... 56

Figure 13: Operationalisation of livelihood assets in the questionnaire.. 58

Figure 14: Map of the study area..... 64

Figure 15: Typical scenery in Manang with hotels at lower left and Mt. Gangapurna (7,455 m) with Gangapurna glacier in the background.	68
Figure 16: Changing population size in Nyishang.....	71
Figure 17: Tourist arrivals in Nepal and ACA from 1985 to 2011.....	73
Figure 18: Tourist arrivals in Nyishang.	75
Figure 19: Impressions of the road (1): The road between Bahundada and Tal; (2): Ongoing road construction after Bhratang; (3) Landslide on the road; (4) Jeeps in Manang.....	85
Figure 20: Tourist arrivals in ACA from 2011 to 2017.....	94
Figure 21: Thematic map of Manang.....	99
Figure 22: Construction site with stupa under renovation in Manang.	100

1. Introduction

Our globalized world is covered by a web of roads connecting cities, countries, peoples and even the remotest places. It is impossible to precisely indicate the total length of roads on earth. According to calculations of the World Bank the total length of roads was 28,840,974.05 km in 2011, but one has to bear in mind that these calculations include only 86 out of 216 countries worldwide (World Bank, 2011). Even with this modest estimate, the road length would suffice to encircle the earth 720 times¹. Today roads spread across almost the entire land surface of our planet and considering the various environmental, sociocultural and socioeconomic impacts, “global road building must be acknowledged as one of the most profound and influential human activities on earth” (Beazley & Lassoie, 2017, p. 3). Initially roads evolved from trails and they were gradually upgraded analogous to the improved transport technologies. Once a trail is elaborated enough to allow larger numbers of humans, animals or vehicles to travel on them, it can be called a road (Lay, 1992).

Today, road construction is tightly linked to the concept of development and more topical than ever. This is resembled by the ninth “sustainable development goal” (SDG) declared by the United Nations (UN) in 2015, where access to adequate infrastructure is also seen as decisive for development (United Nations, 2015b). The positive effects of roads are widely accepted in the development literature and practice and the positive effects of roads are usually “rather listed than discussed” (Wilson, 2004, p. 1). This partly explains why infrastructure could maintain its position as a top priority from the times of dinosaur development efforts in the 1960 up to the contemporary participatory community development phase (Ellis, 1998). Today, not only the big donor agencies promote investment in infrastructure, but also the evolving Asian economies of China and India view road construction as an inevitable mean to ensure further growth and plan to expand their transportation network. A prominent manifestation is Chinas ambitious plan to link East Asia to Europe through

¹ The world’s equatorial circumference is 40 030 km (NASA, 2018)

an overland road and railway network. The project called “One Belt One Road” was announced in 2013 by president Xi Jinping and has an estimated investment volume of about 900 billion US\$ (The Financial Times, 2017).

One section branches off from the autonomous region of Tibet over the Himalayas to Nepal in the south, ultimately connecting China to the growing Indian economy. The increasing Chinese investment in infrastructure construction is widely appreciated by the Nepalese government which expects a positive impetus for their quest for modernization, and a renegotiation of bilateral relations with India (Adhikari, 2015). Being a landlocked country between two powerful neighbours that are home to the world’s second largest road network (China) and the worlds’ third largest road network (India), brings both advantages and difficulties for Nepal (Beazley & Lassoie, 2017). Both countries, together with big international donor agencies, have offered their support for improving the infrastructure of Nepal as the country has only 62,579 km of roads (of which 62% are merely earthen) (GoN, 2016; Thapa, 2013a). The poor transportation situation in Nepal is closely linked to geographic preconditions. The almost entirely mountainous topography of the Himalayan state impedes road construction and the monsoonal rains pose a steady challenge for maintenance. Nevertheless, the government regards road construction as a crucial component in the efforts against underdevelopment and poverty. Especially in the poverty stricken rural parts of mountainous Nepal, road construction is regarded as a vital step towards poverty alleviation and the improvement of peoples’ livelihoods.

1.1 Statement of the problem

In the Annapurna region in the north-west of Nepal, many of the tendencies outlined above and local manifestations of global trends can be observed. West of the Annapurna massif, the tenth highest mountain on earth, a Chinese funded road through the district of Mustang to the Tibetan border is under construction bringing profound changes to the region (Bardecki, 2009; Brinkman, 2012; Lama & Job, 2014). In the valley of the river Marsyangdi on the eastern and northern parts of the massif, several hydropower plants are to be found. The 50-megawatt Upper

Marsyangdi Hydropower Project (UMHP) started supplying electricity in 2016 and is built and operated to 90% by a Chinese company (The Himalayan Times, 2016). But analogous to the road in Mustang a road further up the Marsyangdi valley, connecting Chame to the villages of the upper Manang valley, was constructed just recently. The road was built as a part of the Rural Reconstruction and Rehabilitation Sector Development Program (RRRSDP), jointly financed by the Asian Development Bank (ADB), the British Department for International Development (DFID), OPEC Fund for International Development (OFID), Government of Nepal (GoN), and the Swiss Development Cooperation (SDC) (Government of Nepal, 2010).

In their draft design and monitoring framework, the ADB assumes several positive socioeconomic impacts due to their project implementation (ADB, 2007, p. 30-31):

- “Enhancing poverty reduction and inclusive development.”
- “Enhanced equity, employment and income opportunities for the poor and disadvantaged.”

Similar arguments are being brought forward by the responsible Nepalese authorities (Government of Nepal, 2010, p. 1 & 16):

- “Women and indigenous people in particular may be benefited more from improved access to the market centres and various service providing agencies like health centres, banks, training institutes, women development offices etc.”
- “Accelerated poverty reduction and inclusive development, thereby enhancing the effectiveness and efficiency of the delivery of public services, and improving access of rural people to economic opportunities and social services.”

In the scientific literature, the implied connection between road construction and poverty alleviation is discussed controversially (deGrassi, 2005; Howe & Richards, 1984; Rammelt & Leung, 2017; Wilson, 2004). Still, this socioeconomic justification

for a technocratic measure like road construction remains unquestioned in most cases by both lenders and beneficiaries, even though it is widely accepted that the outcomes of a road programme depend on various factors and making assumptions about the socioeconomic impacts is highly speculative (Beazley & Lassoie, 2017). Most scientific publications that contribute to the understanding of road impacts conclude that the effects are manifold and vary from case to case due to the unique set of circumstances of each case. There is scientific evidence that roads can have adverse effects on equity and income distribution (Cook, 2005; Hettige, 2006).

This study contributes to the literature on the impacts of rural road construction in developing countries. It aims to understand the effects on individual households and their livelihood strategies, their immediate reactions, and adoptions to the changed situation brought in by the road. Hereby, the proclaimed outcomes on poverty alleviation and livelihood improvement are subject to critical scrutiny. Fieldwork to assess these effects, reactions, and adoptions was conducted primarily in the village of Manang and in villages along the newly constructed Chame-Kangsar road.

1.2 An introduction to Nepal, Manang and the studied road

This section provides a brief overview of the study area and introduces the rough geographical framework in which the studied phenomena are taking place. Further details and in-depth information about the relevant sub-areas will be given in *Chapter 4*.

The district of Manang (1,880m - 8,091m) is situated in north central Nepal and is part of Annapurna Conservation Area (ACA). The district is bordered by the neighbouring Nepalese districts to the east, south and west and by the Tibet

Autonomous Region (China) to the north. The district can be divided into three parts², each with its own geological, ecological, sociological, cultural, and religious peculiarities. The lower part, where the district headquarter Chame is situated, is called Gyasumdo. Secondly, there is the Nar and Phu valley, a rugged and remote area which is difficult to reach and remained forbidden for outside visitors up until 2002 because of its proximity to the Tibetan border (NTNC, 2008). The largest part within the district is the upper Manang valley, locally called Nyishang. It is part of the Trans-Himalaya³ region and stretches from the village of Pisang (3,250m) to the Thorong La Pass (5,416m) which is the transit to the Mustang on the west side of the Annapurna massif. Due to the harsh climate, the steep terrain, the low precipitation and the remote location, the valleys of the Trans-Himalaya are sparsely populated and among the economically least developed parts of Nepal, a country that in turn is amongst the poorest countries of the world (Rogers, 2004b). The upper Manang valley is an exception in this respect. Throughout the history, the livelihood strategy of the inhabitants changed several times (see Chapter 4.2), the latest being trekking tourism from the late 1970s onward. The world-famous Annapurna Circuit Trek (ACT) passes through Nyishang and the main settlement Manang.

The village of Manang at 3,540 meters has long been and continues to be the economically and politically dominant village of the Nyishang region. Since 2015, a motorable road, called the Chame-Kangsar road, connects Manang with the district headquarter of Chame and thus with the national road network (Lee, 2015). The ecologic, social, economic and cultural changes and consequences for people's livelihoods linked to the construction of this road are the central issue of the thesis at hand.

² This segmentation is reflected in the new administrative division of the district, where Nyishang is one *gaunpalika* (see footnote 18)

³ The term Trans-Himalaya describes the high mountain regions of Nepal, India and Tibet (China) that lie between the great Himalayan range in the south and the Tibetan marginal range in the north.

1.3 Objective and research question

The objective of this research is to investigate how the inhabitants of the upper Manang valley react and adapt to the recently constructed road. In Manang, road construction unfolds in a unique setting of environmental, socioeconomic, cultural, and historic peculiarities that makes it very vague to predict potential impacts ex ante.

To understand the changes for the local population, the individual household is put at the centre of attention. Data collection and analysis is framed by the Sustainable Livelihood Approach (SLA) to understand the issues related to road construction from the perspective of the local communities. Furthermore, the institutional parameters and political backgrounds are analysed to enable a holistic view on the phenomenon of road construction in Manang and to embed it into the wider discussion about road construction and development. The discourse about development, road construction and poverty alleviation will provide the theoretical background.

The study seeks to answer the following questions:

1. What are the political and institutional backgrounds of the Nyishang road?
2. Which impacts of road construction can be observed along the road?
3. What are the impacts on different social groups in Manang?
 - 3.1 Which reactions and adaptations can be observed in the tourism sector?
 - 3.2 What are the impacts of road construction on non-tourism actors, and are they in line with the assumed positive effects stated in the project plans?

The first two research questions are aiming to answer questions concerning the “broad picture”. The second two questions, with the related sub-questions, are focussed on Manang as a case study within the broader study area of Nyishang. They seek to answer more specific questions. The questions are formulated descriptively, but the analysis goes beyond the sole description of actualities. The findings from all questions are interpreted and discussed against the theoretical background of rural road construction and development.

1.4 Thesis Structure

This thesis consists of seven chapters. Theoretically, the research builds on an eclectic body of road and development literature, with special emphasis on the interface between transport and poverty alleviation and rural livelihoods. A comprehensive literature review of the relevant published and grey literature is given in the first part of *Chapter two*. The second part narrows the focus on road construction and its impacts in Nepal and introduces the Sustainable Livelihood Approach (SLA).

In *Chapter three*, the fieldwork and the applied research methods are presented and discussed. In this context, topics like the positionality of the researcher, language barriers, and ethical considerations as well as limitations are addressed.

In *Chapter four*, the wider study area and the case study area are introduced with geographic and socioeconomic features that are essential for the understanding of the analysed phenomena. Special emphasis is put on the evolvement of livelihood strategies in the region.

In the following chapter of the thesis, *Chapter five*, the results of the field work are presented. This chapter is divided into two parts. The first segment presents more general results concerning the condition, planning, and construction of the road. It also describes impacts of the road on the wider region. The second part presents the detailed results of the case study in Manang.

Chapter six locates the findings within the broader context of the discourse introduced in *Chapter two*. The obtained results are critically discussed and contrasted with the findings from other scientific publications. Furthermore, the limitations of the study are considered, the research design is critically assessed, and recommendations for future research are given.

The last chapter, *Chapter 7*, is the conclusion, where the key findings and suggestions of the study are summarized and possible implications for practice are proposed.

2. Theory, concepts and frameworks

The concept of development is persistent in the reasoning about the future of many parts of the world. This chapter aims to explain how development became the prevailing paradigm from the historic perspective first. The second part locates the topic of the thesis within the development discourse and summarizes the current state of research on rural road construction and its impacts.

2.1 History of development

Road construction in general and particularly in a country like Nepal is happening in the context of development and therefore must be analysed against the backdrop of the broad and general development discourse. But what exactly is meant when we talk about development? How did the concept evolve and change over the time? Why did the idea of “development” become so central and how is the discourse about roads situated in the broader development context?

2.1.1 From “civilization” to “development”

The nature of the concept of development is highly complex and varying connotations and interpretations of the term have evolved over a long period of time. Though concepts like material progress (Smith, 1776) and different stages of economic development (Marx, 1867) have been subject to scientific inquiries earlier, “development” as a prevailing paradigm is a comparatively young phenomenon. Whereas civilization was the prevailing doctrine in colonial times, the idea of development from the Western⁴ perspective was formed after the end of World War II and the subsequent decolonisation. The division of the world in the First, Second,

⁴ The term “Western World” initially described western Europe, in contradistinction to the Orient (East). Today there is no universal definition and the meaning varies in different contexts. In accordance with the definition of Winkler (2015) the term refers in the work at hand to the European and North American Nations that share common values like freedom, rule of law, equality, market economy, individualism and democracy.

and Third World and the resulting emergence of poorer states in the international system gave birth to development politics and development aid (Akude, 2011).

An important point in history was President Truman's inaugural address in 1949 which marks the starting point for the mission of the international community to bring development to the underdeveloped world. In his "four-point speech" he first outlines three important policies⁵ that characterize the goals for his foreign affairs and then presents point four:

"Fourth, we must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas. More than half the people of the world are living in conditions approaching misery. Their food is inadequate. They are victims of disease. Their economic life is primitive and stagnant. Their poverty is a handicap and a threat both to them and to more prosperous areas. [...] The old imperialism – exploitation for foreign profit – has no place in our plans. What we envisage is a program of development based on the concept of democratic fair-dealing" (Truman, 1949).

This new "developed/ underdeveloped" dichotomy introduced a new world view and consequently, the division of the states in developed and underdeveloped replaced the old division of the world in civilized and uncivilized from colonial times.

2.1.2. Post-war decades

In this first era between 1950 and 1970, the modernization theory was the dominant development theory explaining inequalities in wealth and guiding the development interventions of the Western nations. The underlying assumption was that societies progress through various similar stages. Societies evolve from traditional, backwards societies to modern states following the example of the industrialized Western

⁵ These three points were: the United States will continue to support the new United Nations Organization; the reconstruction of Europe (the Marshall Plan) will be kept up and a joint defence organization will be founded (NATO) to face the Soviet threat (Rist, 2008)

nations (Bernstein, 2007; Huntington, 1971; Rostow, 1952). Rostow (1960), the most influential modernization theorist, gives an excellent summary of his theses:

“It is possible to identify all societies, in their economic dimensions, as lying within one of five categories: the traditional society, the preconditions for take-off, the take-off, the drive to maturity, and the age of high mass-consumption” (p. 4) (see Fig. 1).

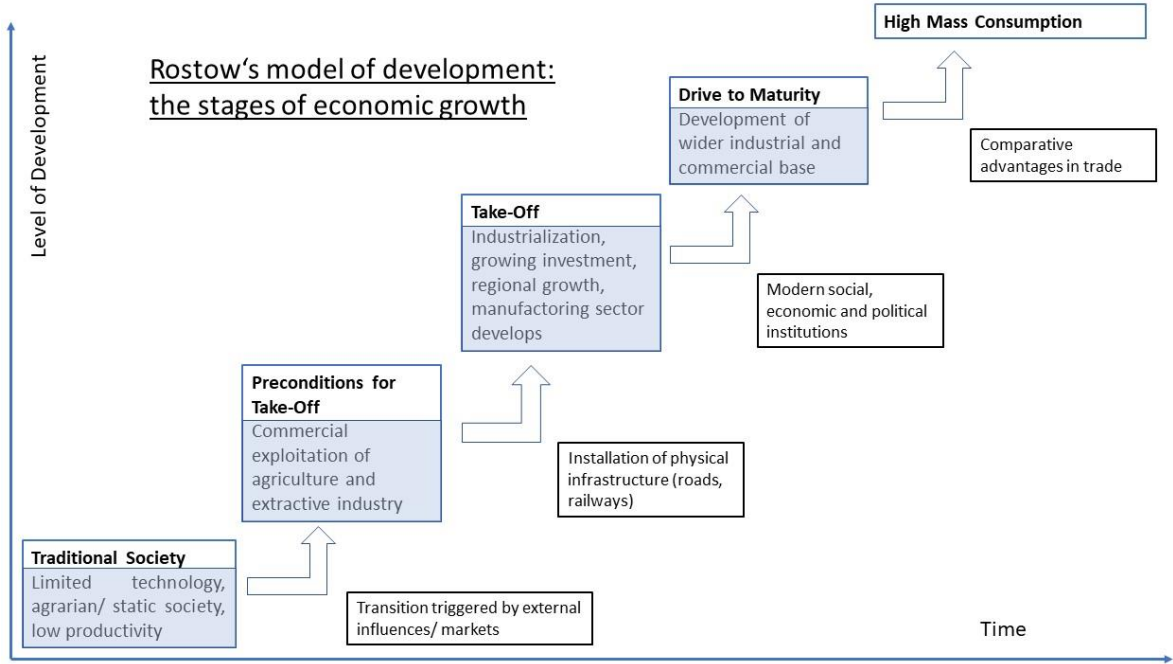


Figure 1: Rostow’s model of development: the stages of economic growth. Based on Rostow, 1952.

The most important indicator for development was, and still is in the business-oriented world development reports of the World Bank, the growth of the Gross Domestic Product (GDP) and the per capita income. Barriers to progress on the evolutionary process of societies were seen in endogenous factors like economic and cultural restraints and technology transfer and investment was believed to aid poorer nations to progress on the common path of development (Rostow, 1960).

2.1.2 Dependency theory

In the 1970s, a new way of thinking about development gained importance. Originally from Latin America, the advocates of the dependency theory disagreed with the model proclaimed by modernization theorists. They argued that the reasons for underdevelopment were rooted in the way poorer nations are incorporated in the world economic system. According to them, resources flow from the “periphery” (poor, underdeveloped countries) to the “centre” (rich, developed) countries, resulting in worsening terms of trade and a further impoverishment and dependency of the former (Cardoso, Faletto, & Urquidi, 1979; Gunder Frank, 1967; Snyder, 1980). The *dependentistas* added a new perspective to the discourse on international relations and how colonial and imperial structures play out in international trade, but the basic presuppositions, namely the belief in development and economic growth, remained unchallenged (Rist, 2008). They analysed the reasons for underdevelopment thoroughly and in doing so had a major influence on the discourse, but gave hardly any solution for the problems they identified.

2.1.3 Theories of middle range

The two competing explanatory approaches of modernization and dependency theory were both appropriate in certain contexts but failed to deliver a conclusive theory to understand the phenomenon of unequal development and poverty in general.

The dissatisfaction with the “big” theories and the involvement of different social science disciplines led to a turning towards theories of middle range at the end of the 1970s (Akude, 2011). These theories have a lower level of abstraction and are limited in space and time. Global inequalities between the First and the Third World were no longer a prime concern. With these new explanatory approaches the growing disparities amongst nations of the Third World and regions within them became the centre of attention. On institutional and political level, the focus shifted

along with the theoretical changes. The UNESCO aimed to make development more human-centred, the fulfilment of basic needs became a priority for the UN, and the World Bank “suddenly became anxious to intervene at the grass roots, without ceasing to fund large-scale projects” (Rist, 2008, p. 163).

2.1.4 Development crisis and neoliberalization

The 1980s saw a shift in development practice towards neoliberal policies. Because many countries of the Third World were desperately indebted, the International Monetary Fund (IMF) and the World Bank demanded that trade balances should be corrected by the so called “structural adjustments”⁶. In order to reduce their debt, borrower countries had to implement certain measures to adjust their economy to the global market (Siebold, 1995). The budgetary austerity and market liberalization led to drastic cuts in public funding and services, lower income, and increasing prices for basic goods and food (Easterly, 2003). As a result, the living conditions of the poor, whose basic needs have been prioritized just recently, deteriorated in many cases. The de-ideologization of ‘development’ and the conformation to the laws of the market began with the structural adjustment programmes and was later intensified after the end of the Cold War.

Notwithstanding that it was a time of neoliberal ideas, the first UNDP Human Development Report in 1990 acknowledged that development can not only be evaluated by economic advances only. It includes improvements in human well-being and from that point on development was measured with the newly established Human Development Index (HDI) (UNDP, 1990). To mitigate the negative effects that the policy of economic liberalization had on the living standards of the poor, the general orientation of the World Bank and the donor organizations took a turn towards the elimination of poverty - a problem that had gone from bad to worse in many parts of the global south (Rist, 2008).

⁶ The structural adjustments were individually designated for each country but mostly they included: budgetary discipline, subsidy reduction, deregulation, competitive exchange rates and privatisation of state-owned companies (Siebold, 1995).

2.1.5 Sustainable development

So far, ecological damage was regarded as a sad but necessary cost of development and growth. Early important publications like the report of the Club of Rome “The Limits to Growth” (Meadows, 1972) had called the ideological hegemony of the “development/growth” paradigm into question for the first time. The growing ecological movement, scientific progress in the field of climate research, and environmental disasters further intensified the discussion. A real turning point in the development discourse was reached with the publication of the Brundtland Commission, called “our common future” (Brundtland, 1987). The report raised many issues that have been neglected in the development discourse like environmental degradation, soil erosion, climate change, deforestation, and the pollution of the oceans. The incorporation of environmental concerns in the development discourse posed great difficulties for finding possible solutions. As Rist (2008) puts it:

“It also meant reconciling two opposite concepts: for on the one hand, it was precisely human activities – especially those stemming from the mode of industrial production synonymous with ‘development’ – which lay behind the deterioration of the environment; and on the other hand, it seemed inconceivable not to hasten the ‘development’ of peoples which did not yet have access to decent living conditions. How could respect for nature be married with a concern for justice?” (p. 180)

To solve this conflict the Commission proposed the concept of “sustainable development”⁷. According to the Commission, development is sustainable when “it meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987, p. 33). This shift in the view on development was consolidated by the Rio Earth Summit in 1992, manifested in the Agenda 21 and steadily adopted as a guiding principle by donor agencies. In the

⁷ The roots of the concept of sustainability can be traced back to various sources. The German Carl von Carlowitz (1645-1714) first introduced the idea of a ‘sustainable use’ of resources to the management of forests where according to him only as many trees should be felled as could be regrown in reforestation projects (Grober, 2013).

German-speaking area, the most common definition of sustainability was introduced by the study commission on the “protection of humanity and environment” of the German parliament formed in 1994 (Bethge, Steurer, & Tscherner, 2011). The commission defines sustainable development as a future orientated development of the economic, ecologic and social dimension of the human existence⁸.

As shown in Figure 2, the ecological dimension is framing the economic and the social dimension because both form integrative elements of the former (Enquete-Kommission, 1998).

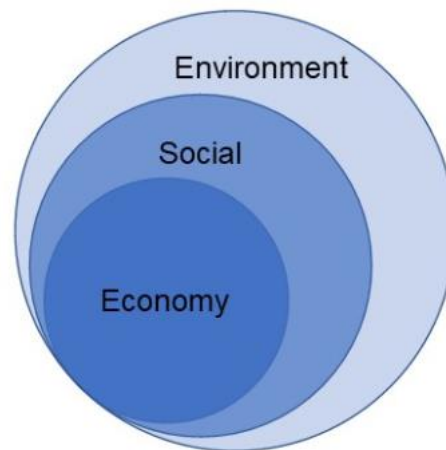


Figure 2: The three dimensions of sustainability

It is contradictory that the concept of sustainable development is based on the same policies (economic growth and expansion of international trade) that historically led to the issues it tries to address, namely growing disparities between rich and poor and to the destruction of the environment. But despite the obvious shortcomings of the concept, sustainable development has become the prevailing paradigm ever since.

⁸ The three dimension are sometimes supplemented by a cultural and a political dimension (Bethge, Steurer, & Tscherner, 2011).

2.1.6 From MDGs to SDGs

Another adjustment in the way development was conceptualized came with the growing global challenges at the beginning of the 21st century. To address the issues of poverty reduction, peacekeeping, and environmental protection, the Member States of the UN formulated eight Millennium Development Goals (MDGs) in their millennium declaration of 2000 (UN General Assembly, 2000). This declaration became possible only because the countries of the Organization for Cooperation and Development (OECD) had to face the fact that half a century of development aid had not prevented the impoverishment of large parts of the world and that this had severe consequences also for the countries of the north (Nuscheler & Roth, 2006). Following this logic, the main emphasis was on a drastic reduction of global poverty and hunger up to the year 2015. The eight goals were:

1. To eradicate extreme poverty and hunger
2. To achieve universal primary education
3. To promote gender equality and empower women
4. To reduce child mortality
5. To improve maternal health
6. To combat HIV/AIDS, malaria, and other diseases
7. To ensure environmental sustainability
8. To develop a global partnership for development

The results after 15 years were disappointing as well as encouraging. The number of people living in extreme poverty⁹ was lowered from 1.9 billion people in 1990 to 836 million in 2015, while the proportion of undernourished people in developing regions has dropped from 23.3 percent to 12.9 percent during the same period (United Nations, 2015a).

Against the background of growing climate change concerns, increasing populations in developing countries, aggravated environmental problems, and a growing gap between rich and poor in the subsequent years the MDGs have shown limited success. The concepts of poverty and development were further differentiated and became multi-dimensional. Still, the MDGs have been criticized for limiting the goals to the countries of the global south, thereby ignoring the influence of consumption patterns and methods of production in the north (Nuscheler & Roth, 2006).

This point of critique was taken into account during the formulation of the new *Sustainable Development Goals* (SDGs) which replaced the MDGs after their expiration in 2015. The SDGs have been resolved in the UN resolution called “the future we want”. Through the new SDGs, the 193 Member States reaffirm “the need to achieve sustainable development by promoting sustained, inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and promoting the integrated and sustainable management of natural resources and ecosystems that supports, inter alia, economic, social and human development while facilitating ecosystem conservation, regeneration and restoration and resilience in the face of new and emerging challenges” (United Nations, 2012, p. 2).

Unlike the MDGs, they apply to all countries and underline the importance that sustainability has nowadays. The SDGs consist of 17 goals, 169 targets, and 230 indicators. For the present thesis, which deals specifically with road construction,

⁹ Living on less than US\$ 1,25 is defined as extreme poverty (United United Nations, 2015a). This definition alone was criticized because it fails to include factors like depth of poverty, relative poverty or the access to basic goods (Ravallion, 2012)

goal number 9 about infrastructure is particularly relevant. The first target under this goal is to “develop quality, reliable, sustainable, and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all” (United Nations, 2015b, p. 24).

The indicators to measure the progress are the proportion of the rural population who live within 2 km of an all-season road¹⁰ and the passenger and freight volumes by mode of transport.

2.1.7 Conclusion

The historical summary shows that the concept of development has changed over the time. It became politically efficacious after World War II in the context of decolonisation, the Cold War and the foreign policy interest of the USA. The Western model of society was juxtaposed with the underdeveloped world which was required to catch up under the guidance and assistance of the developed countries. This is an important consideration as it underlines that the prosecution of national interest (strategic, political, or economic) cannot be ignored in the context of international development cooperation¹¹. The influence of dependency theorists and other schools of thought challenged the perception of the reasons for underdevelopment, but the basic assumption - that economic growth indicated development - remained excluded from their critique. There have always been success stories in international development aid, but for several centuries the overall achievements were minimal, especially considering the invested sums. The continually growing gap between North and South (but also between rich and poor in each) led to the crisis of

¹⁰ In Nepal 51,4% of the population have access to a paved road within a 30 minutes' walk (Government of Nepal, 2017). The goal is to increase road density to 1.5 km per km² and paved road density to 0.25 km per km², and to connect all districts, municipalities and village councils to the national road network.

¹¹ The work of non-governmental organizations (NGOs) and private initiatives was left out in the discourse analysis because the present thesis' focus is on road construction. Small development agencies and NGOs play a minor role in this context.

development in the 1980s. The failure of the big theories resulted in new conceptualizations of human development, reflected in the adoption of the HDI, and a more holistic, people-centred, and multidimensional understanding of underdevelopment and poverty. These changes in the discourse and the growing awareness for global challenges prepared the ground for the formulation of the MDGs, and finally the SDGs. The latter show that - at least in theory – all countries of the world should be considered “developing countries” in order to solve the global problems. Though the concept of sustainable development incorporates ecological and social aspects, as well as ideas of good governance, the field of international development aid remains biased towards economic aspects. Apart from the constraints that still exist, it is a positive trend that concepts like sustainability, participation and global responsibilities have found their way into the development discourse.

2.2 Rural road construction, development and poverty

The following chapter aims to point out where the discourse about roads is situated within the broader development topic. The connection between improved transport infrastructure and development was controversially discussed almost from the beginning of development endeavours. Despite the constant debate about the motivations and consequences, roads are “one of the few priorities that belong both in the 1960s era of dinosaur development projects and in the 1990s era of participatory community development” (Ellis, 1998). How come that roads are so adaptive to changing priorities and theories?

2.2.1 The development-road construction nexus over time

Enhanced mobility and improved transport has long been considered decisive for development and previously colonial extraction and conquest. In the following section, the evolution of the discourse over time is presented.

The popular assumption that more roads lead to more development is deeply rooted in the development discourse and hardly ever questioned by development

practitioners (Bryceson, Bradbury, & Bradbury, 2008; deGrassi, 2005). In part, the misunderstanding concerning road impacts is owed to the methodology of their appraisal and measurement. Many studies relied on exclusively economic views that failed to understand and explain the intricacy of the transport-development interface (Leinbach, 1995). Social benefits and costs were rarely recognised, and even if they were integrated, their conceptualization and measurement was barely insightful (Demenge, 2012).

The literature body on rural roads is a vast accumulation of mostly technical research concerning project feasibility and the impacts of rural roads in developing countries. The early argumentation was grounded in modernization theory and the colonial belief in the importance of transportation for development (Bryceson et al., 2008). The line of thought can be traced back to classic modernization theory (see e.g. Rostow, 1952). The assumption that the development of transport infrastructure was essential for economic growth originates from these times and remained unquestioned until Hirschman (1958) and Wilson (1973) first casted doubt on the power of transport. Their scepticism regarding the role of roads as a catalyst for economic advancement was widely ignored and lending of international donor agencies remained heavily biased towards infrastructural investment. This is reflected in the fact that “in 1977, 25% of World Bank lending went to the transport sector, 46% of it allocated to roads and highways and roughly one-quarter to rural roads”¹² (World Bank, Annual Report 1977 cited in Barwell and Howe, 1979).

In the subsequent period, the share of rural road investment continued to grow as development priorities turned from macroeconomic growth towards agriculture, basic needs and the previously neglected rural areas (Edmonds, 1998; Ellis & Biggs, 2001).

¹² Rural roads are defined by van de Walle (2009) as „small local roads [...] in rural areas that have low or no motorized traffic volumes and link up villages with other villages or the road network” (p. 4)

It was argued that improvements in transport would increase agricultural output and decrease the price for the necessary inputs and thus bring economic development (Venables & Limao, 1999). From the late 1970s on, a number of field studies focused on the realities of rural transport and it has been assessed whether roads actually contribute to agricultural and thus economic growth. The findings suggest that rural road investment has limited positive impact on the lives of rural populations because most of the travel and transport in rural households is linked to household chores and walking on off-road paths (Bryceson & Howe, 1993; McCall, 1985; Porter, 1995).

One study stands out in this context, as it provides solid empirical evidence from several impact studies carried out in Africa, Asia, and Latin America over more than two decades (Howe & Richards, 1984). Despite the great variety and diversity in the four case studies, two major conclusions can be drawn from the findings. First, economic and social effects of roads and their ability to contribute to reduced poverty are highly dependent on the local circumstances and the environmental setting. Second, the distribution of benefits is influenced by land tenancy to a high degree and if the land is unevenly distributed, the landless and poor share of the population will receive little profit. The study concludes that the prevailing optimism regarding positive effects and the power of roads to reduce poverty is not supported by the evidence (Howe & Richards, 1984; Leinbach, 1995).

However, there are also numerous studies in favour of road construction from all times of different set priorities. There is research arguing for the importance of road infrastructure for agricultural output, economic growth, and poverty reduction (Antle, 1983; Binswanger, Khandker, & Rosenzweig, 1989; Jacoby, 2000). Being of mostly economic nature, the assessment methods of these approaches have been criticised (deGrassi, 2005).

A big share of the literature body stands somewhere in the middle, pointing out both positive impacts and negative consequences. These studies advert to the unequal distribution of gains and losses following rural road investment, indicating that generalization and simplification are not eligible (Blaikie, 1979; Porter, 2002).

Overall, most of the research in this context comes to the conclusion that “major investment programmes in rural roads have not achieved the hoped-for increases in neither agricultural production nor more generally in the living standards of the rural population” (Edmonds, 1998). In summary, the proclaimed catalytic effect of rural roads for agricultural development was not scientifically proven.

After economic growth and agricultural development, another argument was brought forward as human development, human rights, and access to social services found their way into transport development agendas. Rural development was defined broader, exceeding “hard” economic indicators and incorporating socioeconomic well-being, and human development (Demenge, 2012). The lack of access to education, healthcare, labour markets, and credit institutions was regarded as a key restraint of human development. Rural road infrastructure aimed to enable access to these services and in doing so improve the living conditions of the rural poor (Ali & Pernia, 2003; Lebo & Schelling, 2001).

The evolution of the discourse about development and roads can be summarised as follows:

First, the focus shifted from the urban/industrial to the rural context, along with that the perspective changed from macro to micro. The underlying developmental goals turned from gross economic development to agricultural growth and then turned towards more social matters like household well-being and livelihood improvement.

Parallel to these alterations in the reasoning for road construction, the rural transport research methodology as well as the selection and appraisal criteria changed over time. World Bank economist van de Walle analysed this evolution in detail, showing that the changing evaluation techniques correspond to the changing purposes of road construction over time. They changed from cost-benefit consumer surplus analysis to measure macroeconomic growth in the 1960s and 1970s, to cost-benefit producer surplus analysis to evaluate agricultural growth in the subsequent decades, and finally to cost-efficiency methods and poverty-focused hybrid methods from the 1990s on (Demenge, 2012; van de Walle, 2002).

It appears that “different evaluation techniques [lead] to optimal justification for the construction of more new roads” (Demenge, 2012, p. 53). Still, the question what rural roads can and cannot contribute to poverty alleviation remains to be finally answered. The argumentation is based on assumptions up to this date. As van de Walle (2009) points out: “despite a general consensus on the importance of rural roads – including much anecdotal evidence and strong priors – there is surprisingly little hard evidence on the size and nature of benefits from such infrastructure” (p. 15).

2.3 Road construction and development in Nepal

Nepal, as a so called “least developed country” can look back on almost 70 years of successful and failed development endeavours (Bista, 2008). A considerable share of the projects was, and is related to infrastructure and transport. The following section gives a detailed account on the nexus of road construction and development in Nepal.

2.3.1 History

The following section aims to give an overview about the more recent history of Nepal and how the nexus between development and infrastructure construction is reflected in it.

Nepal is a landlocked country, surrounded by India in the east, south and west and by China in the north. This difficult geopolitical position between the two most powerful nations in the region is reflected in both the political reality of today, and the history of the country’s development. The example of Nepal illustrates how different national and international interests manifest themselves in infrastructure projects.

The scattered small states on the territory of the present-day Nepal were unified as a nation in 1770 by King Prithvi Narayan Shah, who declared Kathmandu the capital of his kingdom (Whelpton, 2005). In the subsequent time the country remained closed for outsiders until the first visitors were allowed in in 1950 (Donner, 2007). Road

construction in Nepal is aggravated not only by the tight state budget but also by the difficult mountainous terrain of the country¹³. In the south, the flat extensions of the Gangetic plains of Northern India are comparatively convenient for road construction, but the rest of the country offers extremely unfavourable preconditions for the establishment of a transport network¹⁴.

Prior to the 1950s, there were virtually no motorable roads in the country and the few cars in the Kathmandu valley had to be carried over the hills by porters (see fig. 2) (Paudyal, 1998).

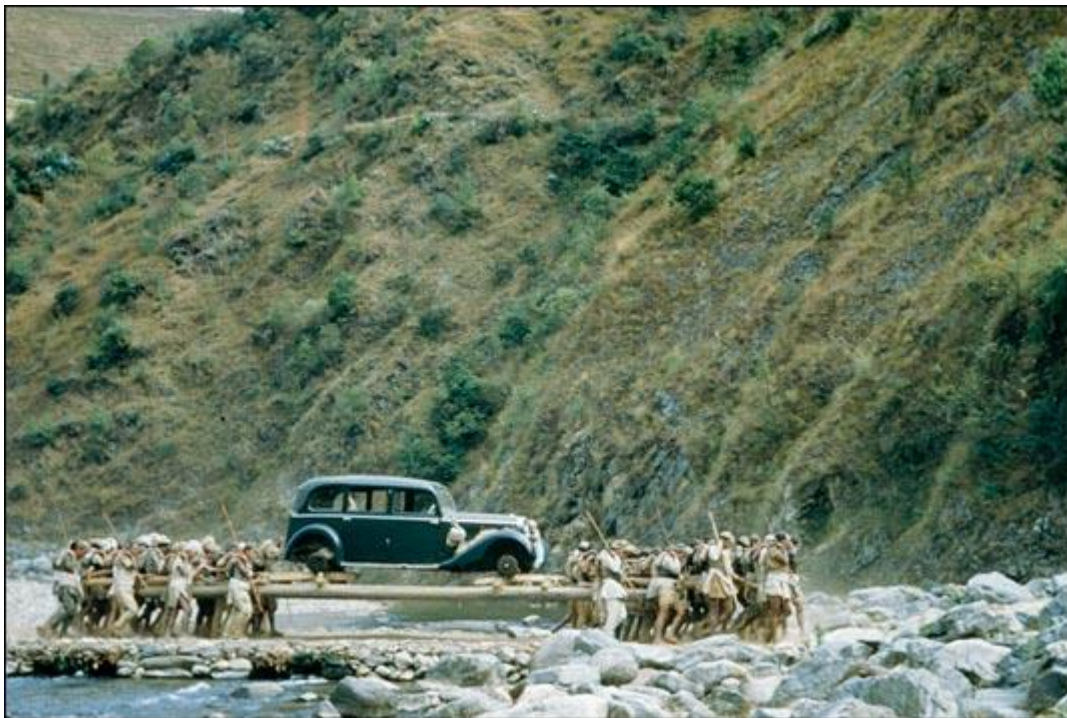


Figure 3: Iconic photo of porters carrying a Daimler across a river on the way to Kathmandu. Volkmar Wentzel, 1950. URL: <http://ngm.nationalgeographic.com/ngm/exploration/postcard06.html>. 12.03.18

¹³ Only 17% of the country's 147,181 km² are flat (Thapa, 2013a)

¹⁴ Nepal is divided into three major landscape units: the flat terai region in the south; the hill region with the Siwalik and Mahabharat ranges in between and the mountain region of the Himalaya (Hagen, 1971).

Plans to install a road connection with India in the south existed since 1927, but it was not until 1956 that Kathmandu was first reachable by trucks and cars (Beazley & Lassoie, 2017). At this point around 729 km of roads existed in the whole country, of which only 264 km were metalled and the cars in Kathmandu were used in a very limited area by the kingdom's elite (Shrestha, 1980).

India helped to construct the first road connecting Kathmandu to the Indian border at Raxaul in 1961. In the same year, King Mahendra signed an agreement with China to build a road connection between Kathmandu and the Chinese border called the Arniko Highway¹⁵. China also funded the Prithvi highway from Kathmandu to the country's second largest city Pokhara. This was highly controversial at the time because India feared that the Chinese investment in Nepal, traditionally part of India's sphere of influence, could weaken its position in the region (Beazley & Lassoie, 2017). This conflict of strategic interests behind road funding becomes obvious in several cases in Nepal. A prime example is the construction of the east-west transportation road network within Nepal, where "India, not wanting to lose its advantage from the existing road system, showed no interest in helping build the road until China began building portions of it, at which point India agreed to take over construction of the remaining sections" (Blaikie et al. 1976 cited in Beazley & Lassoie 2017, p. 14).

Figure 3 shows the expansion of the road network from which the importance of road construction is apparent. The fact that in the 1960s and 1970s, the amount spent on road construction was greater than the added amounts spent for all other government projects underlines the significance that was given to road development (Blaikie et al., 1976). The underlying assumption was that regional centres would act as drivers of economic and industrial growth. The road network should provide the functional links with sub-centres on the district level and other centres of growth. In

¹⁵ Arniko was a famous Nepali artist, craftsman and architect who was sent to China in the 13th century. The introduction of the pagoda style from Kathmandu in China is attributed to him (Beazley & Lassoie, 2017).

1972, the country was divided into four development regions¹⁶ and the plan was to connect them with an “axis of growth” to enable economic development (Paudyal, 1998).

By the end of the 1970s, Nepal possessed a north-south and an east-west road connection, but accessibility for the rural population, particularly in the mountainous regions, was still very restricted (Thapa, 2013).

The integration of the rural parts into the national economy through better infrastructure connection gained relevance during the early 1980s after the backbone of the National Road Network (NRN) had been established. The Integrated Rural Development Programme (IRDP) approach was adopted in the Fifth Five-Year Plan (1975-1980) and implemented in the Sixth Five-Year Plan (1980-1985) (Zurick, 1995). The IRDP projects were favoured by the government and by the international donor agencies, but the effectiveness of the projects was limited out of several reasons. They were planned at the national level, ignored local decision-making, relied heavily on international expertise and thus disregarded institution-building at the local level (Zurick, 1995). A major constraint of these large scale rural development projects was their failure to acknowledge how fast the sociocultural and geographical conditions vary in Nepal over short distances.

The government aimed to address the issue of poor rural connectivity by delegating more responsibility and funding to the local governing bodies like district and village development committees in the 1980s and 1990s. The aim was to link all 75 districts of the country to the NRN. The district of Manang was among the last remaining unconnected districts until the road finally reached Chame in 2013 (Ghimire & Gurung, 2017). Today, there are still two districts to be connected. Both lie in the Trans-Himalaya like Manang which emphasizes the remoteness and inaccessibility of such regions (New Business Age, 2017). After the large-scale project designs produced poor accomplishments, the focus of the government and the international

¹⁶ Later the far western development region was further divided into two parts.

donor agencies shifted towards more local participation. The Green Roads Concept (GRC) aims to reduce poverty by using labour intensive construction techniques in which local villagers are employed. By doing so, it intends to minimize negative environmental impacts, to enhance local accountability for the project and to bring direct economic benefits in the form of employment opportunities and capacity building (Mulmi, 2009). Several village roads have been built under the technical guidance of development agencies like the German Technical Cooperation (GTZ) and the Swiss Agency for Development and Cooperation (SDC). Project appraisals showed encouraging results. The labour based approach produced well-engineered rural roads and had positive impacts on poverty reduction (Starkey, Tumbahangfe, & Sharma, 2013). Nevertheless, most of the roads are still constructed in the conventional way, because of the high costs of such labour based, environmentally friendly, and participatory ventures (Dahal, Hasegawa, Bhandari, & Yatabe, 2010).

The strategic component of rural road construction should not be underestimated (Kreutzmann, 1991). Road construction in Nepal is always closely linked with power and politics on different levels. Roads are an essential tool for states to define their territorial reach and to ensure that political control can be exercised over their territory. In a multi-ethnic country like Nepal - where many parts are culturally and physically far away from the capital city - this is particularly important. They also play a military role, especially in border regions (deGrassi, 2005; Wilson, 2004). Beside this, roads are a strong symbol with which states can show that they care for their citizens. Rural populations demand roads partly because they are a manifestation of development and modernity and contribute to a better self-esteem¹⁷. In many parts of rural Nepal, roads are strong symbols for modernization and a promise for a better future, despite the lack of evidence to justify this. During the people's war between the Communist Party of Nepal (Maoist) and the government of Nepal from 1996 to 2006, many roads were constructed by the Nepalese army. They used the fastest

¹⁷ Wilson (2004) points out that "it would be presumptuous, not to say patronizing, to suggest that village people are misguided in their desire for greater accessibility". The fact that road connection is high on the wish list of many rural communities can partly be explained with the inherent symbolic component of roads.

and cheapest methods to ensure political and military control and to pacify the rural communities by providing them with a road connection. Both major roads in the Annapurna region were either fully (Beni - Jomsom road) or partly (Besisahar – Chame road) constructed in this manner (Beazley & Lassoie, 2017). This underlines the strategic importance of rural roads for Nepalese authorities.

In recent years, Chinese investment gained more relevance in Nepal as numerous infrastructure projects were being realized together with Chinese government and private sector actors. Since 2012, a second road to the Chinese border in the north is operating, reducing the dependence on the existing Arniko Highway established 1966. These developments can be interpreted as “a strategic reorientation of geopolitical alliances between Nepal, China, and India” (Murton, Lord, & Beazley, 2016, p. 1).

In summary, the history of road construction in Nepal follows the global phases described in *Chapter 2.2*.

In Nepal, the following phases can be identified (Demenge, 2012; RAP, 2003):

1. Mid-1950s to mid-1970s: In the initial phase of infrastructure construction the state focused on the establishment of a Strategic Road Network (SRN) and with “nation building” under the influence of the country’s two giant neighbours. It was the time of internationally funded large-scale infrastructure projects.

2. Mid-1970s to early 1990: This phase was characterized by the integrated rural development projects. Roads were regarded as axes of growth and increased agricultural production.

3. Mid-1990s until now: The most recent phase saw the era of more participatory road building approaches, at least in theory. With emphasis on poverty alleviation and environmentally sensitive techniques, concepts like the GRC emerged. It should be stressed here that despite positive findings from these developments, most of the rural roads in the country are still built in the cheapest way possible, disregarding

social or environmental consequences (S. Bajracharya, personal communication, August 16, 2017).

The historic view illustrates the importance of road construction for development in Nepal. Starting as a virtually roadless country in 1950, Nepal managed to build approximately 80,000 km until 2015 (The Himalayan Times, 2015) (see fig.). Road construction is complicated by the country’s topography and the maintenance is aggravated by the intense monsoonal rainfalls. The establishment of the road network was only possible with the financial and practical help of international donor agencies and the two neighbouring countries. India and China were involved in road construction endeavours over the whole period. For Nepal, this implies a balancing act between dependence, subordination and the skilful exploitation of their intermediate position.

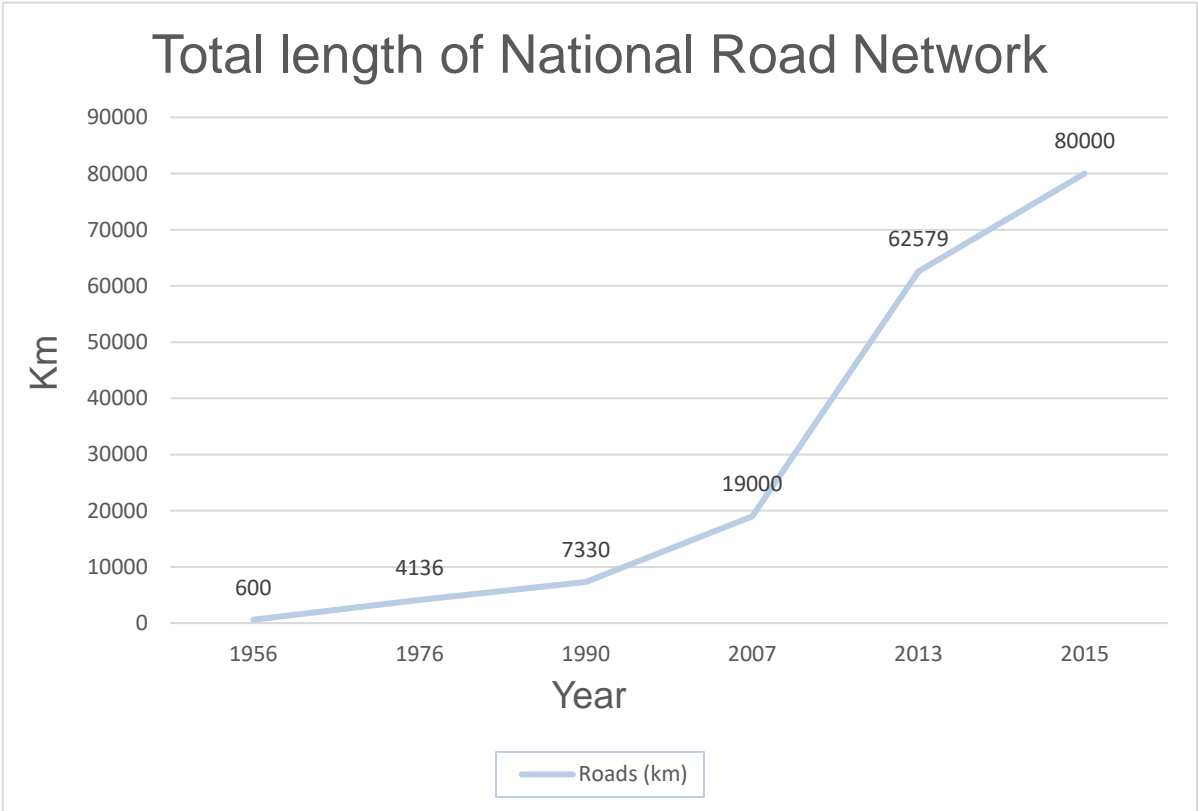


Figure 4: The total length of the National Road Network (NRN) from 1956 to 2015. Data compiled from DoLIDAR, 2016; Paudyal, 1998; Shrestha, 1980; The Himalayan Times, 2015.

To understand how a road is built in Nepal, it is important to have an overview about the responsibilities and authorities involved. The totality of roads (the NRN) consists of two main categories:

- The first category is the Strategic Road Network (SRN), which comprises 11,636 km of highways and major feeder roads that link up the country's economic centres, borders and district headquarters, and provide inter-regional connections (Thapa, 2013b). The Department of Roads (DoR) under the Ministry of Physical Infrastructure and Transport (MoPIT) is responsible for the SRN, thus the maintenance and construction falls under the remit of the central government.

- Secondly, the Local Road Network (LRN) consists of district roads, village roads and agricultural roads and is under the responsibility of the local government bodies¹⁸. The latter operate under the direction of the Department of Local Infrastructure and Agriculture Roads (DoLIDAR) of the Ministry of Federal Affairs and Local Development (MoFAaLD) (Thapa, 2013b). In 2016, the LRN consisted of 57,632 km of roads (DoLIDAR, 2016), but these numbers can be misleading in terms of serviceability of the roads.

¹⁸ Up until 2017 the local government bodies were the District Development Committee (DDC) on the district level and village development committee (VDC) on the village level. After the promulgation of the new constitution on September 20th, 2015 the state of Nepal is restructured. It is now divided into 7 provinces consisting of the existing districts, leaving the district boundaries unaffected (Devkota, 2014). On the local level a "rural municipality" (called *Gaunpalika* in Nepali) will be the administrative authority. The VDCs have been dissolved officially on March 10th 2017 but the process of federalisation is progressing slowly (The Himalayan Times, 2017b). Because all the sources used in this thesis still refer to the VDCs and the transition to the *gaunpalika* hasn't been finalized at the time of the field work, both terms will be used.

LRN by geographic region

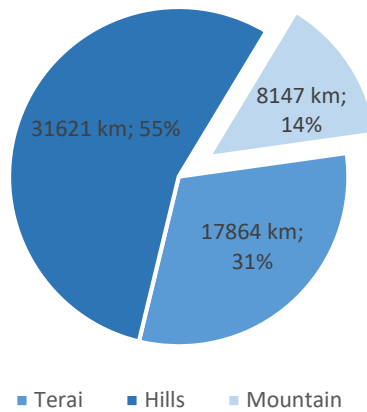


Figure 5 Total length of LRN in different geographic regions of Nepal. Based on DoLIDAR, 2016.

Due to landslides, poor geometry, and other environmental problems, only 40% of the network is operable (Thapa, 2013b). This is due to the fact that “these roads were constructed to open up access to remote/rural areas as quickly as possible but without giving due consideration to the operability and sustainability of roads thus constructed” (Thapa, 2013b, p. 2). On the roughly 8,000km of the LRN in the mountain regions of Nepal, this problem is particularly prevalent. The mountain region of Nepal has the lowest length of roads (see Fig. 5) and only a negligible percentage of the roads are all weather roads in the mountain region, the rest of the roads are mainly earthen (see Figure 6).

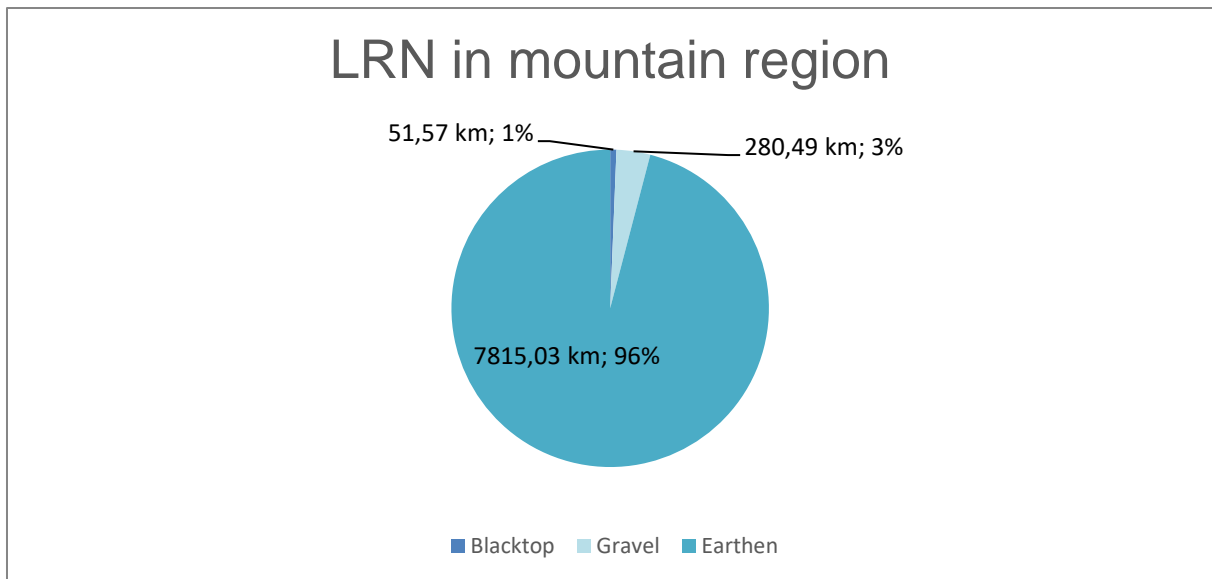


Figure 6: Length and percentage of different road surface types in the mountain region. Based on DoLIDAR, 2016.

Delegating more responsibility to the village level and involving local governments in infrastructure projects is part of a decentralization process which has been a priority in the National Transport Policy (His Majesty's Government of Nepal & Ministry of Physical Planning and Works, 2001). The empowerment of local governments aims to enhance participation of the local communities, but it “can also lead to corruption when local politicians who are often also the local contractor influence road alignments. This can lead to ad hoc road construction and environmentally detrimental construction techniques” (Dahal et al., 2010 cited in Beazley & Lassoie, 2017, p. 19).

The general problem of political instability in Nepal also affects road construction, as well as the partly vague allocation of responsibilities. The lack of coordination between state authorities, local political bodies, and other stakeholders is an additional hampering factor.

2.3.2 Rural road’s impacts

The previous sections have shown the broader context in which road construction unfolds and introduced to the case of Nepal. *Chapter 2.2* has shown that it is

generally difficult to make universally valid statements about the impacts of rural road construction. Having said that, however, there are numerous impact studies from Nepal that show that certain effects have occurred regularly and thus can be regarded as characteristic. The following section gives an account on the environmental, socio-economic and socio-cultural effects of rural road construction in Nepal. The three spheres will be considered individually, but this must not hide the fact that they are interrelated and mutually dependent.

2.3.2.1 Environmental impacts

Road construction is a profound interference with the natural system and often has adverse impacts on the environment (Tsunokawa & Hoban, 1997). The environmental impacts differ depending on the individual circumstances. The Nepalese Himalaya is an area highly prone to landslides (Petley et al., 2007). Numerous studies indicate that road construction has negative impacts on landslide occurrence. Vibrations during the construction, alterations in slope hydrology, poor drainage, as well as improper cutting and filling techniques increase the slope instability (Dahal et al., 2006; Hearn, 2002; Lennartz, 2013; Lennartz, 2014; Petley et al., 2007).

In mountainous areas - especially in combination with intense monsoonal rains - this results in high costs¹⁹ and substantial numbers of fatalities caused by landslides each year. Petley et al. (2007) conclude that “a major component of the generally upward trend in landslide impact probably results from the rural roadbuilding programme, and its attendant changes to physical and natural systems” (p. 23).

Furthermore, roads are being held responsible for deforestation and erosion. Deforestation happens both during the construction phase and after the finalization as a result of easier access to forest resources (Ives, 2004; World Bank, 2006).

¹⁹ The estimated cost of damage to infrastructure caused by landslides and floods in Nepal is US\$20 million per annum (Khanal, 1996 cited in Beazley & Lassoie, 2017). These numbers underline the enormous challenges for maintaining infrastructure in Nepal.

The erosion can lead to increased sediment loads in rivers, deterioration of water quality, and loss of soil.

Increased pollution, noise, and worsened air quality are further negative impacts, mentioned in studies. Brinkman (2012) identifies increased dust and noise pollution as one of the – if not the – most negative environmental consequences of road construction, both for the local population and for trekking tourists in the Kali Gandaki valley.

2.3.2.2 Socioeconomic impacts

There are several studies with varying findings about the socioeconomic impacts of rural road construction in Nepal. The first large-scale research project was the 3-year study by Blaikie et al. (1976) on the social and economic effects of road provision in West-Central Nepal. Employing rather leftist perspectives on human-environment interactions²⁰, the authors placed special emphasis on inequality and poverty alleviation. Their findings indicated that the building of roads had very little effect on agricultural and economic development in the regions studied. They state that “no evidence has been found to support the optimistic prognosis of the effect of roads” (Blaikie, Cameron, & Seddon, 1977, p. 67). A follow-up study was conducted 20 years later, confirming the findings from the first study (Blaikie, Cameron, & Seddon, 2002).

A similarly negative conclusion is drawn by Lama and Job (2014) on the recently built Kali Gandaki road. According to them, the road further intensified the unequal distribution of economic resources in the region. The anticipated benefits for the poor did not accrue. These findings are in conformity with other case studies, where unequal distribution of benefits was observed (Brinkman, 2012; Campbell, 2010; Dillon, Sharma, & Zhang, 2011; Hettige, 2006).

²⁰ Piers Blaikie - the principal author of the study – first developed political ecology as an academic discipline.

A study by the International Centre for Integrated Mountain Development (ICIMOD) shows a more positive picture (Paudyal, 1998). The aim of the study was to analyse how rural roads could be used more effectively for poverty alleviation. At village level, benefits such as decreases in transportation costs, greater availability of goods and cheaper prices for goods like kerosene and salt were reported. Furthermore, positive social impacts like improved access to health and education facilities were noticed. At the institutional level, they found a lack of clarity and coordination resulting in poorly constructed roads that are expensive and difficult to maintain (Paudyal, 1998). They conclude that the use of a low-cost, environmentally friendly, and participatory approach would increase the benefits for local communities.

There is scientific evidence supporting their suggestions. An external review of the District Road Support Programme (DRSP)²¹ found that the roads included in the project had positive economic effects and led to social empowerment in the project villages (Strickland, 2009). But as in the cases mentioned before, Strickland (2009) also points out that poor may benefit during the construction period through employment possibilities, but that economically more advantaged groups are more likely to grasp the opportunities offered by the enhanced connectivity.

The importance of integrated project management and the advantages of a labour based approach is emphasized by a number of studies. Kafle (2007) points out in his study for the Asian Development Bank that complementary activities like the provision of training, granting of micro-credits, and the introduction of agricultural improvements are paramount for maximizing benefits for the poor. This is consistent

²¹ The DRSP was started by SDC in 1999. Labour intensive methods have been used and local workers have been employed during the construction phase (Starkey, Tambahangfe, & Sharma, 2013).

with an impact study on rural roads constructed with the Green Road Approach²² which also emphasized the benefits of integrated project designs.

As shown in *Chapter 2.1.1*, the effects of rural roads on income, income distribution, access to health and education, and other socioeconomic indicators are difficult to determine. The empirical evidence from Nepal highlights that *roads are not enough*. The best results have been reported from projects carried out by NGOs where road construction was accompanied by careful planning, site supervision, complementary pro-poor efforts, and a collaboration with the local communities. Projects that lacked complimentary activities often proved to have negative socioeconomic outcomes like unequal distribution of benefits, landlessness, and outmigration in search of off-farm employment.

2.3.2.3 Sociocultural impacts

There is a growing consensus about the importance of including sociocultural aspects in the analysis of rural road projects amongst donors, INGOs and NGOs but still very little empirical evidence is existing. One reason for this is that sociocultural impacts are hard to quantify and may be perceptible years after the completion of a project. But the lack of data is also due to the fact that these effects have been recognized just recently as important aspects. In a culturally highly diverse country like Nepal²³, they are expected to be even more relevant (Beazley & Lassoie, 2017).

²² According to Mulmi (2009) the Green Road approach “strongly addresses the social inequalities and disparity within the society. It adopts the poverty alleviation measures through the employment generation during construction to the income generating activities through the self-help promotion or local level capacity building. It encourages the local to take the ownership of the road for the sustainable maintenance of the roads” (p. 159). The concept has been successfully applied in several road construction projects in Nepal by the GTZ and the SDC (Shrestha, 2007).

²³ The national census from 2011 lists 125 different casts and ethnic groups and 123 spoken languages in the country (Central Bureau of Statistics, 2014). A wide variety of cultural and religious practices exist throughout the country.

Migration is one obvious sociocultural factor connected to road construction because connectivity has effects on mobility patterns. Increased mobility facilitates in- and outmigration in rural areas. The increased influx of migrants and/or tourists has impacts on religious and cultural traditions (Roubal, 2014). In contrast, the outmigration of men seeking employment may have financial benefits, but it also enhances gender inequality by increasing the workload of women in agriculture (Ghimire, 2002). Other case studies on gendered mobility in Nepal list consequences such as an increase in female trafficking and commercial sex trade (Beazley & Lassoie, 2017).

Out-migration has proven to be a promising livelihood strategy for certain social groups such as Dalits²⁴ in Nepal. The physical mobility has encouraged many Dalits – and of course other Nepalis – to work in the Gulf countries or Malaysia. The remittances earned enabled many Dalit people to escape their disadvantaged position in Nepali society and to raise their standard of living (Jones & Basnett, 2013). The remittances earned by migrant workers are an important part of the Nepalese economy. According to a report of the International Fund for Agricultural Development, the percentage of GDP in Nepal grew from 17% in 2007 to 32% in 2015 (IFAD, 2017). Out-migration is encouraged by rural road construction through enhanced mobility and this has major implications for the rural population, especially for women, their children and old people.

2.4 Roads as coupled social and ecological systems

The review of the development discourse in general and the embeddedness of rural road construction in it over the time reveals that many things have to be taken into consideration. It emphasizes that an exclusively local point of view entails the risk of losing sight of the big picture. Road construction projects in Nepal are virtually never

²⁴ Dalit is a term for the occupational castes – formerly called untouchables – which are lowest castes in Hindu caste system. They suffer from various restrictions and discrimination in society. There are approximately 3 million Dalits in Nepal (Bhattachan, Sunar, & Bhattachan, 2009)

exclusively financed by the Nepalese Government and the involvement of international donor agencies and state development aid has wide-ranging implications. For one thing, the underlying motivation for their involvement has to be seen against the backdrop of the development discourse with its changing paradigms and, moreover, the geopolitical and strategic component has to be taken into account. The changing development paradigms also influence the justification and argumentation in favour of road construction.

Furthermore, the literature analysis shows that generalizing and simplistic statements about the impacts of rural road construction are not substantiated by sufficient empirical evidence. The varying effects must be analysed on a case-by-case basis, thereby taking local peculiarities into account.

The multidimensional nature of rural road construction is also reflected in the observed effects. Aside from the obvious physical alteration of the ground surface, rural road construction has economic, ecologic, social, and cultural effects. It also has a symbolic component because roads are interpreted as a manifestation of modernity and progress.

This is exemplified by the Marsyangdi Highway. The construction of the road in the Annapurna Conservation Area (ACA) is firstly a physical encroachment on the landscape. The ground is compacted and modelled in order to facilitate the movement of animals, humans and vehicles on it. But besides this physical impact, the concept of landscape also incorporates a social, cultural, and political dimension (Benton & Redclift, 1994). Thus, the consideration must go beyond the sole environmental realm. The human intervention in the environment of course has environmental effects (see *Chapter 2.3.3.1*) like increased landslide risk. But landslides in turn effect the environment itself – for example by blocking of the river with landslide material – as well as the human realm, as it poses a threat for human habitation or limits their mobility. In a region inhabited by different ethnic groups and castes, the effects that roads have on mobility cannot be reduced to physical

parameters either. Cultural realities and traditions which influence the access to mobility must therefore be included in the appraisal. The impacts of norms and traditions again are not limited to the human realm. They have shaped the relationship of the people with the natural environment and are important for conservation as a result.

This example demonstrates the need for holistic perspectives on rural road construction. Because of the interlinked effects on different spheres, road construction can be interpreted as human-environment interaction or coupled human and natural system. Coupled human and natural systems are integrated and complex systems in which human and natural components interact (Liu et al., 2007a). A typical characteristic of coupled human and natural systems are “feedback loops in which humans both influence and are affected by natural patterns and processes [...]. These loops can be positive or negative and can lead to acceleration or deceleration rates of both human and natural components as well as their interactions” (Liu et al., 2007b, p. 640).

There are various terms for coupled human and natural systems in literature²⁵. The most common ones are: human-environment interaction, coupled human-environment system, coupled human and natural system, coupled social-ecological system (Carter et al., 2014; Walker et al., 2004, Ostrom, 2009; Turner et al., 2003).

Although there are differences between the approaches, there are some important characteristics shared by all of them. The most important conformity relates to the relationship between nature and society which has been examined in Western thought in different ways over the time (see Figure 7).

²⁵ For the remainder of the thesis the term human-environment interaction will be used.

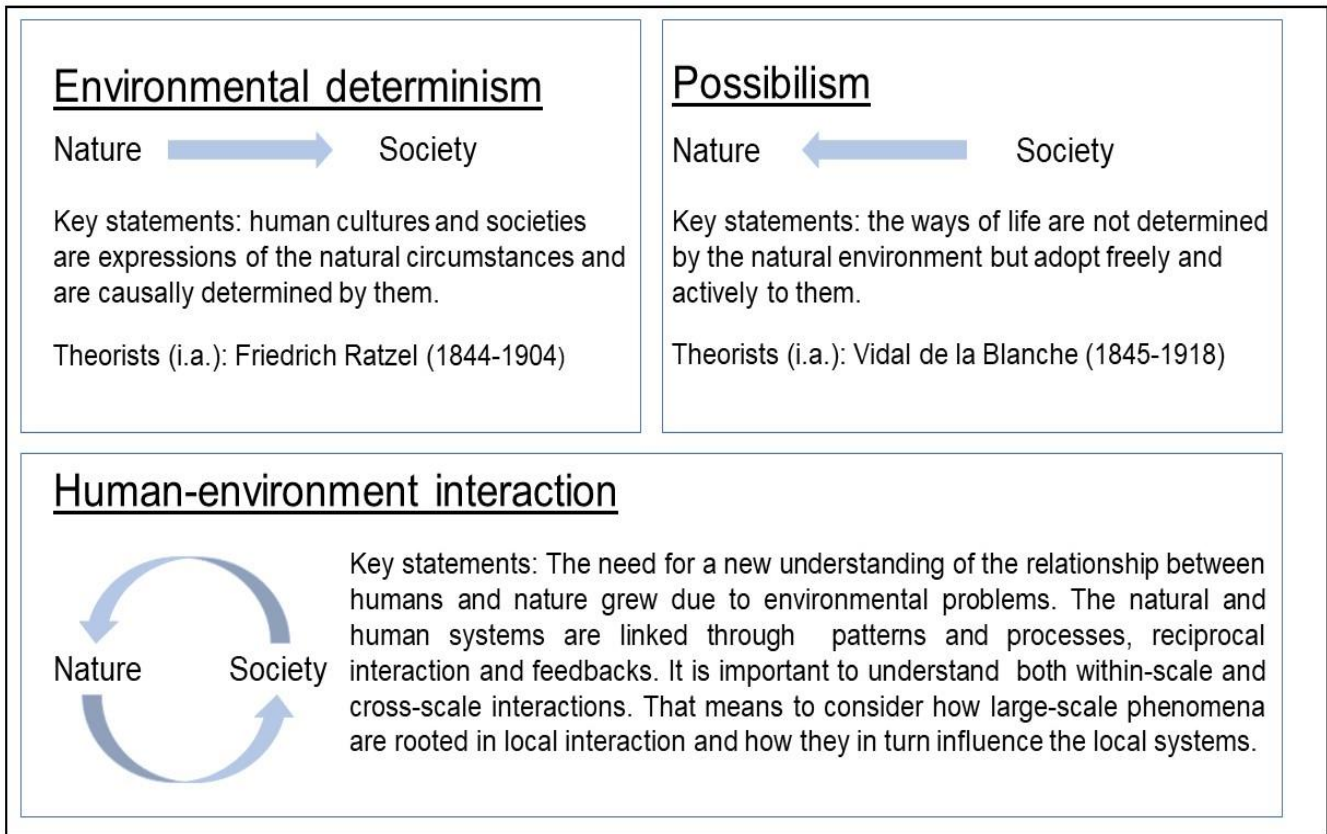


Figure 7: Three different ways of conceptualizing the human-nature relationship. Based on Brondizio & Moran, 2013; Carter et al., 2014; Coy, 2015; Liu et al., 2007a; Liu et al., 2007b; Ostrom, 2009.

This thesis at hand does not aim to comprehensively understand and explain all the factors, actors, processes, interlinkages, and impacts that are involved in such a complex phenomenon as road construction. In the author's opinion, this system approach involves the danger of losing focus because everything can be integrated in such a holistic and broad approach. Nevertheless, it is beneficial to take the coupled system approach as a reminder that road construction is a prime example of human-environment interactions. Roads influence humans and the environment. Reducing the impacts to either socioeconomic, environmental, or sociocultural factors would not do justice to the complexity of their nature.

2.5 Rural roads and livelihoods

The previous chapters clearly pointed out the need for holistic views on the effects of rural road construction. To grasp the effects on the local people and their environment as comprehensively as possible, the Sustainable Livelihood Approach (SLA) was an important guidance for the work on this thesis from the beginning, because it incorporates all the factors that are playing a role in human-environment interactions. In this chapter, the SLA is presented in a brief way that is adjusted to the requirements of the work. Furthermore, strengths, weaknesses, and the applicability for the research project are discussed.

The SLA – an overview

The SLA is an enormously complex framework. It was developed in the context of development cooperation and poverty alleviation. The growing importance of concepts like sustainability and participation and the shift towards a more people-centred view on development cooperation (see *Chapter 2.1*) called for new assessment and planning tools. It was first developed as an analytical tool to better understand the realities of poverty by Chambers in the early 1990s. It became increasingly popular in the subsequent years and is now the dominant approach to the implementation of development projects by several big donor agencies (Morse, McNamara, & Acholo, 2009). The core definition of livelihoods was established by Chambers and Conway (1992) and later refined and modified. Today, the definition of Carney (1998) has become standard. According to her, “a livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with or recover from stress and shocks, maintain or enhance its capabilities and assets and provide sustainable livelihood opportunities for the next generation; and which contribute to net benefits to other livelihood at the local and global levels and in the short and long term” (p. 2).

There are numerous interpretations of it and endless variations of its components, but some core principals are shared. The approach is people-centred and puts the poor household and its actions to make a living at the centre of attention. The central component in the framework are the different assets - or capitals – that people possess and use for their livelihood (see Figure 8).

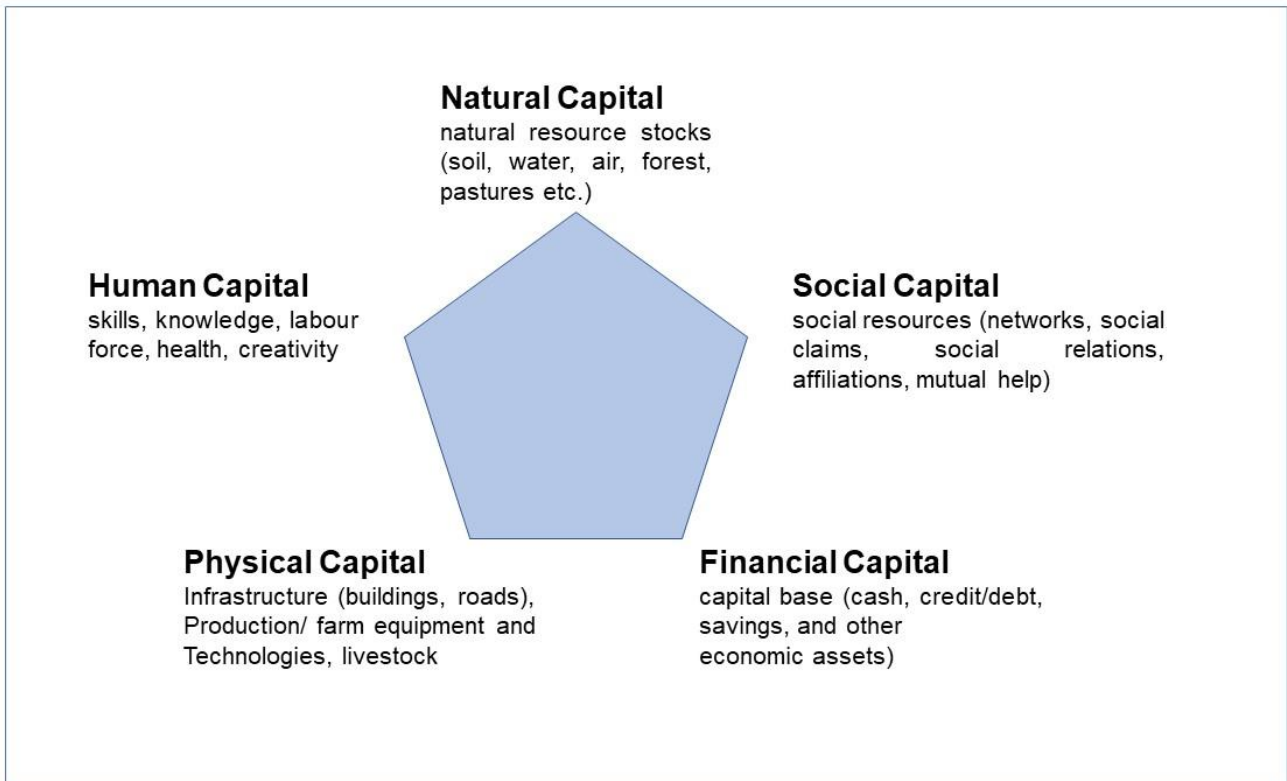


Figure 8: the pentagon of capitals/assets in the SLA. Modified after Haan, 2012; Morse et al., 2009; Scoones, 1998.

The livelihood approach aims to understand how poor people organise their lives in order to achieve certain livelihood outcomes. For this purpose, they make use of the available capitals and create one or more livelihood strategies.

Most SLAs are documented in a framework. The framework introduces the different factors that are involved and shows the relationship between them. In this work, the

framework of DFID was used, which is also the most widespread version of livelihood framework (see Figure 9) (Cahn, 2002). Central in the framework again are the assets which indicate the options that people have. The focus is on what people have in the first place, rather than on what people might need. The factor assets is refined by Ellis (2000), who emphasizes the access to assets and how access is influenced by social relations (such as gender, class, kin, or belief systems) and institutions. This additional focus is relevant for the study area because the social system is highly hierarchical and access to certain resources like land, water, and forests is precisely regulated (Gurung, 1976).

The access and the use of the available assets is influenced by the structures and processes. The analysis of laws, policies, societal norms etc. provides the link between the micro (person, household, community) and the macro (regional authorities, powerful politicians, or influential private companies). The relationship is characterized by mutual influence and access. The recognition of structures and processes enables a multi-level understanding of how the use and access of assets is facilitated or restricted (Scoones, 2009).

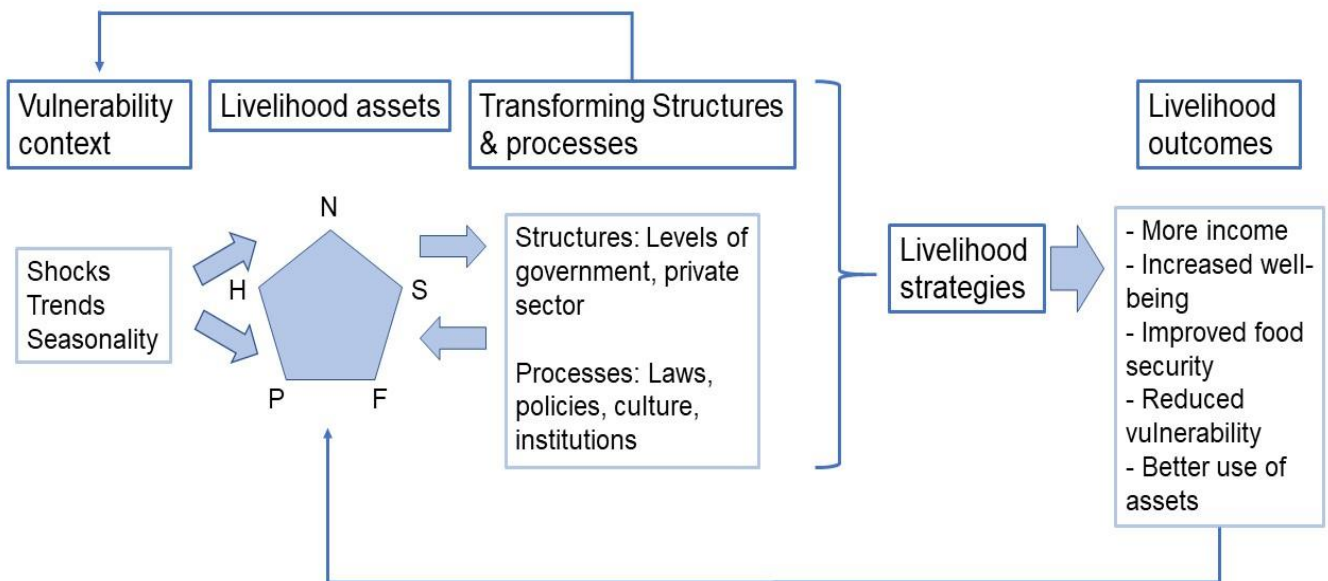


Figure 9: The livelihood framework. Based on Carney et al., 1999.

The next step is to identify livelihood strategies. People choose livelihood strategies depending on the available assets, the structures and processes that influence them, and the vulnerability context under which they operate. This could be a single activity but it also “includes complex, contextual, diverse and dynamic strategies developed by households to meet their needs” (Gaillard, Maceda, Stasiak, Le Berre, & Espaldon, 2009, p. 121). The livelihood strategies adopt to environmental and institutional changes (Carney, 1999, p. 3).

Livelihood strategies are chosen to achieve the best possible livelihood outcomes. The whole livelihood system is framed and influenced by the vulnerability context. It demonstrates that “people’s livelihoods and their access and control of resources can be affected by events largely beyond their control” (Cahn, 2002, p. 3). An overview of vulnerability factors is given in Table 1. The vulnerability context demonstrates the

exposure of people to shocks, trends or seasonality and how they cope with and adopt to them.

Scale	Shocks	Trends
International	Conflict, financial crisis	Climate change, globalization, international economics, technology
National	Economic shocks, large scale natural disasters, conflict,	Trends in population growth, internal migration patterns, politics
Regional/ local	Earthquakes, floods, droughts, conflict, pests and disease (threat for agriculture, livestock and people's health)	Culture, gender, household dynamics

Table 1: Overview of vulnerability factors. Based on Cahn, 2002; DFID, 1999a; Hussein, 2002.

In addition to the trends and shocks listed in Table 1, there is a seasonal vulnerability of prices for agricultural products, employment opportunities, or health (Cahn, 2002).

The complexity and the holistic understanding of (rural) livelihoods is both a strength and a weakness of the approach. The SLA is ambitious to depict the complex reality of rural livelihoods and poverty, but with every factor that is included in the framework, more relationships and feedback loops emerge and required data increases immeasurably. The next question is the importance and weighting of the individual factors. An empirical block by block operation of every factor is very hard to realize for practitioners and researchers (Haan & Zoomers, 2005). The inclusion of certain factors like culture remains unsolved to this day. In the DFID frameworks, it was first considered to be part of the vulnerability context, later it was regarded as a process (Cahn, 2002). Ellis (2000) views culture as an institutional factor determining access to assets, whereas Daskon and Binns (2010) criticise that culture is widely seen as a constraining factor. Instead of being regarded as an impediment to economic growth, cultural factors should be integrated neutrally into the livelihood analysis (Cahn, 2002). For the work at hand, the SLA was very helpful during the fieldwork because it provided a structure for the analysis of the local situation. It was

insightful to have the framework as a guidance, for example for the identification of social groups, the understanding of how life is organised in different groups, and the search for impacts in various dimensions of the livelihood strategies. The SLA was a constant reminder that rural life is complex and multidimensional. Further information on how the SLA was incorporated and used in the research process will be given in *Chapter 3*.

3. Methodology

The field work was carried out from the beginning of August to the end of October in 2017. Research was conducted in several places in Nepal. Table 2 gives an overview of the field trip itinerary.

Date	Place	Research work
07.08.-25.08.	Kathmandu	Semi-structured interviews
26.08.-05.09.	Pokhara	Semi-structured interviews
05.09.-12.09.	Besisahar-Manang village	Travel by foot to Manang, observation and interviews with various respondents on the way
12.09.-24.09.	Manang	Research phase in study site
25.09.-10.10.	Pokhara	Semi-structured interviews
11.10.-26.10.	Kathmandu	Semi-structured interviews
24.11.-30.11.	Kathmandu	Semi-structured interviews

Table 2: Itinerary of the field trip

This chapter describes how the field work was planned and carried out, and which methods were applied. Detailed information on the methods as well as on issues related to language and translation, ethical considerations, and the researcher's positionality will be given in associated subchapters. The field work can be divided into several phases. First, there was the work in Kathmandu and Pokhara. Despite a thorough analysis of the relevant literature and several preliminary interviews with Mr. Prof. Dr. Kurt Luger in the stages prior to the field trip, the thematic focus as well as the actual study area had to be narrowed down with the help of local experts and stakeholders. For this purpose, as many different perspectives on the topic were obtained from interviews with experts from a variety of different areas. In the next step, the decisive element of the study – the road itself – was given a close inspection by following the road by foot from Besisahar to Manang. During this stage,

conversations with construction workers, hotel owners, farmers, and people passing by provided valuable insights. The main data collection took place in Manang village and the surrounding settlements and was ethnographic in nature. After returning from the study site, the gained knowledge as well as first interpretations were discussed and evaluated with selected experts. The figure below shows some impressions from the field work.



Figure 10: Impressions from the fieldwork. (1) Interviewed woman and her house in Manang; (2) The author and two interview partners; (3) Jeeps on the way to Manang; (4) Respondent and the translator in a Manang household.

3.1 Research approach

At this point I would like to introduce me as the author in the first person. The use of the personal pronouns is firmly established in qualitative social research (Richardson & St Pierre, 2008; Rose, 1997; Silverman, 1999; Wolcott, 2009). Generally, the scientific style abstains from first person formulations to suggest that arguments are brought forward from a neutral, objective, and unbiased position. Berg and Mansvelt (2000, p. 173) state that “this practice of writing position the researcher as a disembodied observer of the truth, rather than a (re)presenter and creator of a particular and partial truth”. In qualitative social research in general and in the case of my particular research project, this positivist understanding of truth and knowledge is not backed by reality. I spent four months in Nepal during which I tried to collect data objectively and impartial, but the work was influenced by my personal interests and the experiences I made during the fieldwork all the time, from the topic identification to the formulation of research questions and to the selection of methods. I came with an approximate idea, but the main questions that are examined in this thesis evolved and changed several times during the fieldwork. In addition to that, nearly all my data was generated through interactions with other people making me part of the social relations I attempted to understand. The researcher becomes an instrument of research and this position must be acknowledged and reflected (Berg & Mansvelt, 2000).

The overall orientation of my research projects and the methods applied was qualitative. There are several reasons for that. Since the study is about a rather recent phenomenon, it has not been subject to many empirical studies before. Therefore, it was not possible to formulate hypotheses before actually visiting the study area. For this reason, but also because of organisational obstacles due to the remoteness of the study area, the approach had to be exploratory and flexible. Because the qualitative approach is not precisely pre-defined, it was possible to adjust the research design to the changing realities on site. This openness is an important characteristic of qualitative approaches (Meier Kruker & Rauh, 2005). Ultimately, qualitative research aims to understand human behaviour. The study

aimed to understand how the newly constructed road influences the life of the people living in Manang in different spheres. In this context the qualitative approach emphasizes the importance of different perspectives and realities which has effects on the role of the researcher as well (Küsters, 2009). The subjective perception of the respondent – but also of researcher himself – are essential parts of the process of knowledge generation in the qualitative approach (Meier Kruker & Rauh, 2005). The individual insights are screened for regularities and patterns in the next step and ultimately can be generalized. This inductive nature of knowledge production made quantitative methods rather unsuitable (Flick, 1995). Although the secondary data collection, the hotel survey, and the household survey obtained quantitative data as well, the overarching approach and the analysis of the data was qualitative. In general, qualitative research has a tendency towards what Silverman (1993) calls ‘anecdotalism’. That means that because the sampling is not randomized, the findings might be based on the analysis of a few well-chosen cases. This hampers the validity of the conclusions and explanations drawn from the data. To avoid premature conclusions, the findings of the different methods were cross-checked using triangulation. Triangulation aims to “get a ‘true’ fix on a situation by combining different ways of looking at it or different findings” (Silverman, 1999). This does not mean that the findings depict the ultimate and only truth or reality, but it enhances the validity and reliability of qualitative research. In this context, the quantitative data gathered from the household survey and the semi-structured interviews with the hotel owners are a useful supplement for the qualitative findings.

3.2 Kathmandu and Pokhara

As depicted in Table 2, there were several periods during the stay in Nepal where I spent time in Kathmandu and Pokhara. During these periods, mostly problem orientated semi-structured interviews were conducted.

3.2.1 Interviews: sampling, design and practice

Prior to the departure to Nepal, some initial appointments were organized, drawing on an existing network from a previous stay in Nepal. These interviews functioned as “door-openers” and facilitated the establishment of a network of dialogue partners in Kathmandu and Pokhara, based on the snowball principle (Meuser & Nagel, 1991). After the first contacts were made, mainly four questions guided the selection strategy (Gläser & Laudel, 2010):

- Who has relevant information on the research topic?
- Who is able to provide precise and useful information?
- Who is most likely willing to give such information?
- Who is available?

Sometimes it was necessary to interview a suggested person out of “political” reasons, whether it be to satisfy the provider of the contact or just to get acquainted with somebody. The interviews were mostly conducted in the respondent’s offices or in other places like restaurants. Because I was mainly dependent on public transportation, the number of interviews per day was limited. Table 3 gives an overview of all the interviews conducted in Kathmandu and Pokhara.

No.	Date	Name	Position	Expertise	Category
1	07.08.17	Dr. Pranil Upadhayaya	Scientist/ Nepal Tourism Board, Kathmandu	Tourism in Annapurna Region, Development	NGO (national)
2	14.08.17	Dr. Anu Kumari Lama	Tourism specialist/ ICIMOD, former employee of ACAP	Tourism in Annapurna, Road construction in Annapurna region, development	University
3	15.08.17	Prof. Dr. Sagar Raj Sharma	Dean/ Department of development studies, Kathmandu University	Development	University
4	16.08.17	Dr. Siddharta Bajracharya	Program director/ Nepal Trust for Nature Conservation (NTNC)	ACAP, institutional background & planning process of road construction	NGO (national & regional)
5	17.08.17	Serku Sherpa	Freelancing trekking & tour guide	Trekking tourism in Annapurna region	Private sector
6	20.08.17 & 13.10.17 & 24.11.17	Prof. Dr. Bhim Subedi	Professor of geography/ Tribhuvan University Kathmandu	Livelihood strategies in Manang, Migration in Manang, Agriculture,	University
7	27.08.17	Narayan Sapkota	former president of trekking agents association of Nepal (TAAN), owner of trekking agency	Tourism in Annapurna region	Private sector
8	28.08.17	Tek Gurung	Environmentalist/ ACAP Pokhara	Road construction, tourism, conservation	NGO regional
9	29.08.17 & 3.10.17	Binod Basnet	Project Chief/ ACAP	Role of ACAP, Road construction, tourism, conservation	NGO regional
10	29.08.17 & 27.09.17	Som Bahadur Thapa	former president of Pokhara Tourism Council, owner of trekking agency	Tourism in Annapurna region	Private sector
11	30.08.17	Surya Thapaliya	Senior officer/ NTB Pokhara	Tourism in Annapurna region, Role of NTB in planning process	NGO (National/ regional)
12	30.08.17	Uday Bhattarai	Regional Manager/ NTB Pokhara	Tourism in Annapurna region, Role of NTB in planning process	NGO (National/ regional)
13	30.08.17	Rashmi Acharya	Tourism Officer/ ACAP	Conservation & Development in Annapurna, Role of ACAP in road construction process	NGO (National/ regional)
14	01.09.17 & 26.09.17 & 8.10.17	Krishna Gurung	Former ACAP officer	Conservation & Development in Annapurna, Role of ACAP in road construction process	NGO (National/ regional)

Table 3: List of interview partners in Kathmandu and Pokhara

The interviews were semi-structured, combining structure and flexibility. Prior to the interview, a guideline with relevant questions was formulated. The extent to which the interview was structured depended on the priorities of the interview (whether breadth or depth were envisaged) and the interviewee's field of expertise. The interviews took up to two hours²⁶. The semi-structured interviews had a pyramid structure, starting with more general questions at the beginning and more specific ones hereinafter. The interviews were partly recorded, but since the research wasn't designed to work closely with transcripts and texts, most of the interviews were protocolled and later noted in a field diary. Of the three interviews that were recorded, only one was transcribed because it contained insightful citations. Furthermore, I made the experience that some interviewees were feeling unsecure or uncomfortable with being - or even refused to be recorded. All the interviews in Kathmandu and Pokhara were conducted in English (see *Chapter 3.5*).

3.2.2 Secondary data collection

Additional data was gathered in the archive of NTNC and the library of ICIMOD in Kathmandu where literature and maps were either borrowed or purchased. The data obtained includes internal reports and statistical data in digital and non-digital form. Additional data on tourism in ACA was provided by ACAP in Manang and Pokhara. Furthermore, literature on relevant topics was bought in Pilgrim's bookshop or in the case of Prof. Dr. Bhim Subedi a publication was accessed directly from the author. Beyond that, newspaper articles dealing with relevant topics were collected.

3.3 From Besisahar to Manang

While trekking from Besisahar to Manang, the main method I used was systematic observation, supplemented by unstructured interviews. Observation enables the

²⁶ The interview can be divided in four phases (Meier Kruker & Rauh, 2005): Introduction, conversational gambit, development of the topic, conclusion. In the case of Nepal, the first phases of a conversation are decisive for the further course of the interview and thus can take some time.

researcher to understand the everyday behaviour of persons and helps to place the information gained through interviews into the wider context (Meier Kruker & Rauh, 2005). One major challenge is to focus and structure the observation while being confronted with complex situations. I noted all the impressions and data in a field diary during breaks and in the evenings. Photos of the physical condition of the road and the surrounding area were taken (see Figure 11). The interviews with peasants and construction workers on the roadside were conducted in Nepali, the hotel owners and other tourism-related stakeholders were interviewed in English (see *Chapter 3.5*).

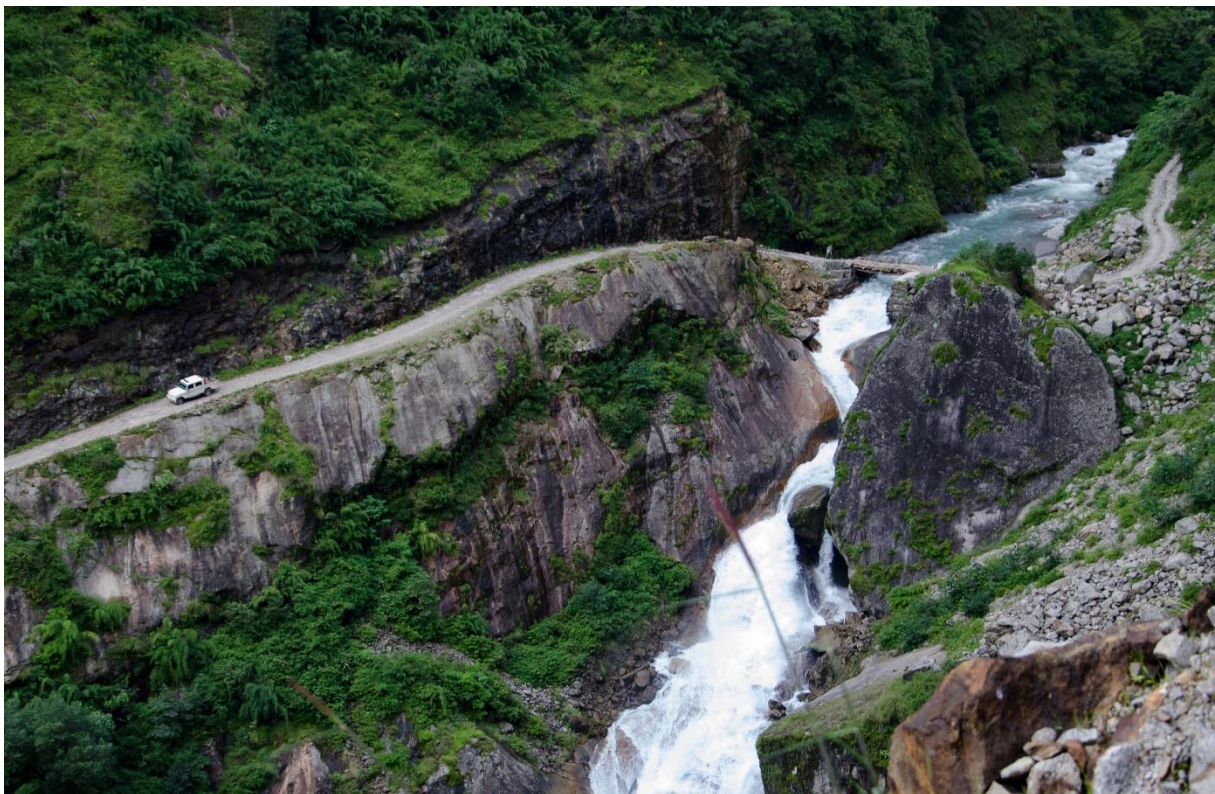


Figure 11: The road at the border of Lamjung and Manang district with improvised wooden bridge over the Myardi Khola.

3.4 Manang village

The main focus of the study was on the impacts of the road in Manang. The concentration on Manang happened out of various practical and theoretical reasons.

First and foremost, Manang is the main settlement in the Nyishang valley and the exceptional position gives special relevance to the development of Manang. Being the biggest and economically strongest settlement, Manang is the most dynamic place in the region in terms of entrepreneurial activity and tourism. Furthermore, ACAPs regional office is situated in Manang. The ACAP staff were both important informants and much needed support for the field work.

3.4.1 Participant observation

I spent 12 days in Manang interacting with the different inhabitants of the village, thereby attempting to get insights in “the ‘multiple realities’ and diverse social practices of various actors” (Long & Long, 1992, p. 5). This involved for example eating breakfast with the local construction workers, accompanying ACAP staff during their work, visiting religious sites, taking photos of everyday life activities and agricultural work, and countless conversations with villagers. Being part of the spontaneity of everyday life can help to develop deeper understanding for a place and/or social processes (Kearns, 2000). Observation also helped to select people for in-depth interviews. The results were noted in a field diary and used to cross-check the findings from other methods used. The insights gained from participant observation helped to put results into perspective and to interpret information contextually.



Figure 12: Peasant woman in Khangsar in front of her field of Buckwheat.

3.4.2 Interviews and mapping

After the positive experiences in Kathmandu and Pokhara, I planned to continue the interviewing in Manang in the same manner (see Chapter 3.2.1), but it turned out to be unfeasible under the local conditions. Interview requests were accepted, but I was treated with suspicion and sometimes with open disapproval. During the interviews, the respondents were mostly reticent and reserved. The sampling and the interviewing method had to be adjusted to these challenges. I decided to concentrate on two major groups in the village, namely tourism actors (hotel owners and shop keepers) and non-tourism actors (all the parts of the population that do not profit directly from tourism)²⁷. This segmentation evolved from the information gained in the

²⁷ This division seems very rough but actually the breakdown of the local society in these two interest groups and social groups was reasonable in the context of road construction (for details see Chapter)

previous steps of the research process and the accuracy of this decision was supported by the observations in Manang. Along with a mapping of the tourism infrastructure in Manang, I conducted a full survey of all hotels in Manang. The interview guideline inquired mostly basic information on the hotel business but also included questions concerning the attitude towards the road construction (see Annex I). After the 13 questions of the interview guideline were answered, I continued to ask in-depth questions concerning issues that needed further clarification. For example, if the respondent declared that his/ her attitude towards the road was “very negative” or “very positive” I inquired further information about the impact of the road on the individual business. The data obtained from this survey was entered and analysed in IBM SPSS Statistics 23 and further processed into tables and figures in MS Excel 2013, some of which are displayed in the result chapter (see *Chapter 5.6*). A thematic map was created with ESRI ArcMap.

3.4.3 Questionnaire survey

The other focus group was more difficult to contact and required a higher level of standardization. The people not involved in tourism mostly spend their days on the fields working or inside their houses. Due to the language barrier, it was not possible to casually meet and interview them. Therefore, a questionnaire was designed, translated into Nepali with the help of two friends, and printed out in the ACAP office (see Annex II). Generally, questionnaires are a useful method to obtain data about people, their behaviour, social processes, or individual perceptions (Mc Guirk & O’Neill, 2016). In this case, the questions aimed to understand the impacts of the road on spheres related to people’s livelihood assets. The questionnaire starts with the query of socio-economic variables of the respondents and some basic information on the household. This is followed by the questions regarding the perceived effects of road construction on parameters linked to livelihood assets. Every asset was covered with several questions (see Figure 13). The perceived effect of the road construction on the 15 factors had to be rated on a five-point Likert scale (“very positive” to “very negative”).

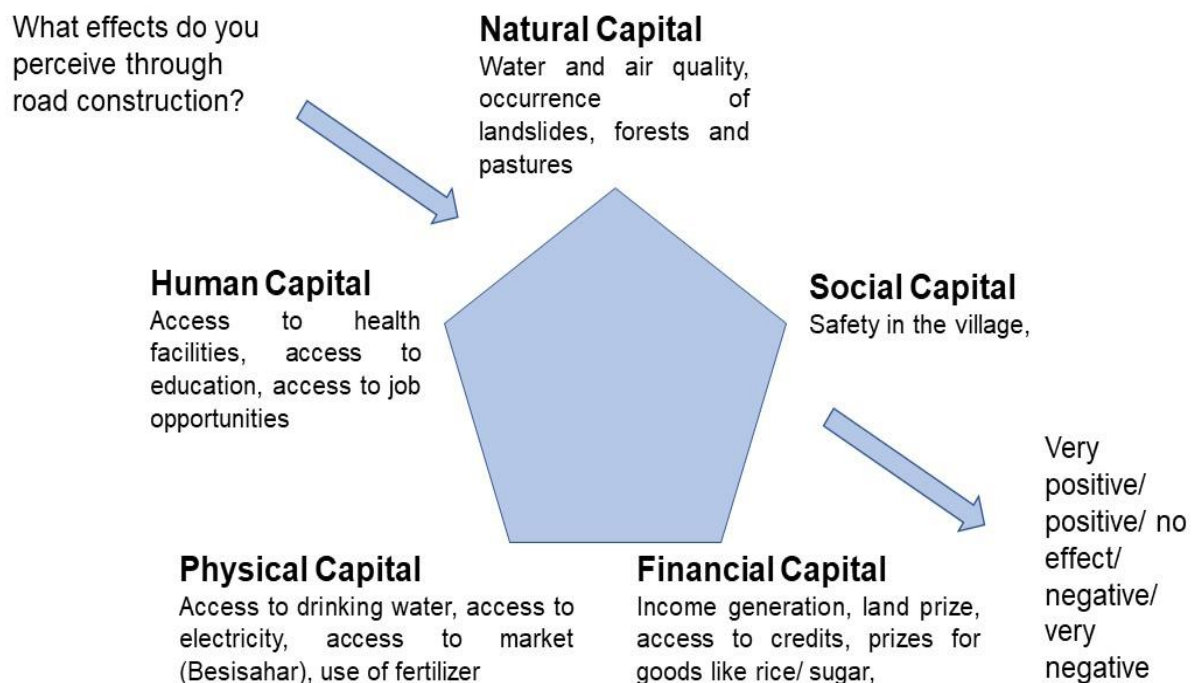


Figure 13: Operationalisation of livelihood assets in the questionnaire. Based on DFID, 1999a.

The operationalization was guided by the DFID key sheets on the livelihood approach (DFID, 1999b; DFID, 1999a) and customized with the knowledge about the local circumstances. The questionnaire was tested with Mr. Bikram Gurung – the owner of the hotel I was accommodated in – and Mr. Babu Lal Tiruwaa.

3.4.3.1 Sampling and questionnaire implementation

With the help of Mr Babu Lal Tiruwaa of ACAP, I found a translator in the next village Brakha²⁸. Together with him, households were selected step by step. The sampling method applied is called *theoretical sampling* (Glaser, 1967). Hereby, the information from previously selected cases is used to select the next case (Meier Kruker & Rauh, 2005). The cases can be selected because they are expected to fill knowledge gaps or show new perspectives, but also in a way that they contradict the previous findings. Extreme as well as average cases are selected until the field is saturated, that means that new cases are not believed to deliver new information (Flick, 1995). It is important to ensure that there is no tendency towards only selecting cases that support the emerging argument or explanation (Silverman, 1999). Such sampling methods are not aiming at representativity, they are chosen to reveal different experiences and strategies (Meier Kruker & Rauh, 2005). This way of sampling can be applied when the size and the characteristics of the total population – in this case all the people living in Manang who are not involved in tourism – are not precisely known. The number of necessary cases depends on their information content and on the time and resources available (Meier Kruker & Rauh, 2005). The potential to generalize the data is increasing with a growing sample size (Silverman, 1999). In total, 15 questionnaires were completed. Care was taken to include as many different perspectives as possible, but also to visit enough representatives of important social groups (for example farmers). The interviews were conducted in the respondents' houses. I introduced myself in Nepali language and after that, the translator took over and led the interviewee through the questions. After the completion of the closed questions, issues that emerged during the filling of the questionnaire were further discussed in-depth, especially concerning social issues which are difficult to cover

²⁸ The translator, Mukhiya Senchuri, belonged to the occupational caste of the blacksmiths (Bishwakarma). His family migrated to Manang in the search of job opportunities. The native inhabitants of Manang are the Manangi or Nyishengba (See Chapter ??). There is no strict caste system within the Manangi community but migrants from other ethnic groups – even if they adopted Buddhism like my translator – remain in their ancestral caste. For the research, the affiliation of Mr. Senchuri to a lower caste group was a big advantage because it opened a window into the lives and homes of poor Manang residents and normal farmers. These insights would probably not have been possible with a translator belonging to the dominant ethnic group.

with closed questions (Dunn, 2000). The answers to the open in-depth questions were noted. The interviews took between 30 and 60 minutes.

3.4.3.2 Questionnaire analysis

The obtained data was entered into IBM SPSS Statistics 21 and analysed case by case. Especially frequency distributions of answers and differences between the households were of interest. Because of the small number of respondents, it was waived to calculate sophisticated statistical tests and regression parameters. The informative value of the survey was based on the collection of different individual perspectives on the issue. In this respect, the questionnaire was rather used like an interview guideline than as a tool to collect a vast sample size that is submitted to statistical tests. The results of the analysis were either illustrated with MS Excel or depicted in narrative form.

3.5 Role of the researcher and ethical considerations

When research is conducted in a foreign country, especially in countries of the global south, it is important to critically reflect on the positioning of the researcher. As Dowling (2000) writes: “societal norms, expectations of individuals, and structures of power influence the nature of those interactions”, and this must be acknowledged when analysing the results. The process of knowledge accumulation in interaction with the research participants is not happening in a social vacuum, but is influenced by the researcher’s age, sex, race, social position, and nationality (Kearns, 2000). This is preventing complete objectivity, let alone the fact that the presence of an observer can modify the behaviour that is observed. Being a young, white, unmarried, male representative of an academic institution from a Western country in a foreign culture requires reflection on the own role in the research process. This combination of attributes entails an outsider position in Nepalese society. While these issues played a tangential role for the interviews in Pokhara and Kathmandu, they came into effect in the study area. While the majority of the local population is used to foreigners, especially trekking tourists for decades, there were cases where I was

probably the first Westerner to enter the house of the respondents and this in turn was a challenge, both for me and the respondents and influenced the gathered data. Especially in the poor and socially disadvantaged households that I visited in Manang, moral issues emerged because power relations were highly uneven. Sometimes I would interview the head of the family with a monthly income of 45US\$ while his eleven children gather around the scene. Inevitably, hopes were sparked and I was asked for help or financial support in exchange for their support for the research project. This relationship is potentially exploitative in the sense that the flow of knowledge was unidirectional from the respondent to the researcher (Dowling, 2000). Some of the informants that were negatively impacted by the road might have expected that I would support their cause just because I attended to the matter and showed interest for their situation. The sympathy for the respondents and the familiarity that sometimes occurred – also as a result of the cooperation with the translator – must be critically reflected to ensure that as much objectivity as possible is maintained. The same effect in the other way around occurred when people from a respected position in society like high-ranking experts or influential Manangi people were interviewed. In these cases, I was sometimes given a pejorative feeling of insignificance because of my age or academic degree.

3.6 Language & Translation

For the first two stages of the field work, language issues did not emerge. All the informants in Kathmandu and Pokhara spoke sufficiently to perfectly English. Because I was accommodated in a Nepalese family, it was possible to practice a lot and improve my command of the Nepali language. This was very helpful in the further course of the field work. Between Besisahar and Manang, I could not call on the services of a translator to interview the construction workers on the road or farmers on their fields²⁹. Later, my basic command of the language helped to gain

²⁹ The interviews were informal conversations dealing with basic information like: how many people work on the construction site? From which district do you come from? How much do you earn per day? Where do you sleep? What do you eat?

trust and build a respectful relationship with many informants. Nevertheless, it was indispensable to get help from a translator for the household survey, also because some respondents preferred to speak the local language *Manangi*. The translator's English was sufficient.

3.7 Limitations and comprises during fieldwork

The work in the field was complicated by events beyond my control and by necessary comprises due to organizational difficulties. Aside from the actual research, the three months of field work included the final selection of the research focus, the study area and the methods to be applied. Additionally, the quick obtainment of a research permit (see Annex II) prior to the work in ACA required time-consuming negotiation of bureaucratic hurdles. Later, the nearing national festival of Dashain³⁰ prevented the conduct of a planned survey amongst the pupils of the local elementary school and increased the pressure to finalize the interviewing of hotel owners because of the expected inflow of domestic tourists during the holidays. The household survey was impeded by the upcoming harvesting season that involved a lot of preparation and work for the farmers. Because harvesting season and the peak tourist season coincide, the survey had to be completed beforehand. The translation of the questionnaire was done by Mrs. Barsha Rijal and Mr. Ravindra Adhikari. It was done to the best of their ability and had to be finished in a very short amount of time.

Unexpectedly, the work in Manang was complicated by a rather reserved attitude of parts of the local population towards me. The low degree of cooperation of local hotel owners and community leaders was discouraging sometimes whereas the experiences during the household survey were very positive. I was treated with warmth and hospitality in all households that I visited.

³⁰ Dashain is the most important Hindu festival. During the eleven days of celebrations all public authorities are closed.

4. The study area

The research area varies according to the respective issue of interest. In the preliminary stages, all the research focused on the Eastern part of the Annapurna Circuit Trek (ACT) in which Nyishang and Manang village are situated. The general questions regarding political and institutional backgrounds and general impacts of the road focus on this geographical area. Because the Upper-Manang valley forms a geographical, cultural, religious, and historical unit, different from the rest of the wider research area, it is the second subarea that was considered. Because the high valley is congruent with the administrative unit called Nyishang, it will be called Nyishang in the following for the sake of simplicity. As depicted on Figure 14, the village of Manang is located within Nyishang at 3,516 meters above sea level in the high valley of Manang (Rogers, 2004b). Manang was selected as the research site for the case study.

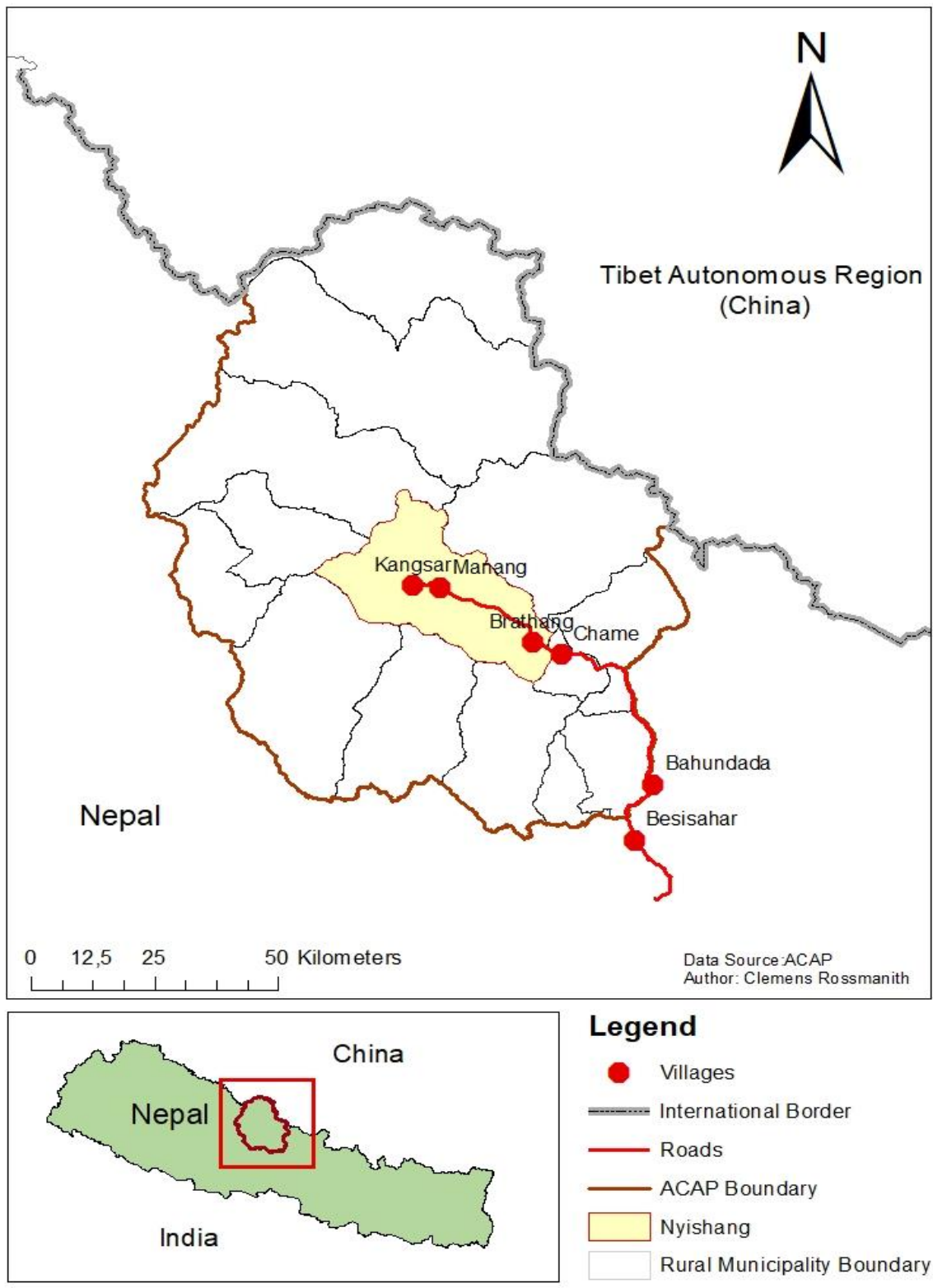


Figure 14: Map of the study area. Own depiction.

Both Nyishang and Manang are part of the Manang District which in turn is part of Annapurna Conservation Area (see Box 1). Manang District is bordered by the neighbouring districts of Mustang, Myagdi, Kaski, Lamjung and Gorkha in the west, south and east and by the autonomous region of Tibet (China) in the north. The district covers an area of 2,246 square kilometres. With only 6,538 inhabitants, it is one of the most sparsely inhabited regions in Nepal (CBS, 2014). Further information on the population is given in Table 4.

	Population (total)	Ethnic groups/ castes	Religion
Manang (district)	6,538	Manangi (Gurung/Ghale), Kami, Bishwakarma, Sherpa, Tamang, Newari, Magar, Tibetan, Thakali, Rai	Hinduism, Buddhism
Nyishang	2,222	Manangi (Gurung/Ghale), Bishwakarma, Tibetan	Buddhism
Manang (village)	630	Manangi (Gurung/Ghale), Bishwakarma, Tibetan	Buddhism

Table 4: Population, ethnic groups and religion in the study area. Data compiled from CBS, 2014c; CBS, 2014a; CBS, 2014b.

Table 4 shows the homogenous composition of the population in Nyishang and Manang village in contrast to the whole district. The people living in Manang are referred to as Nyeshangba (Cooke, 1985; van Spengen, 1987), Nyishangte (Rogers, 2004b), Manangba (Gurung, 1976), or Manangi (Aase & Chaudhary, 2008). Because most people across Nepal – including the Manangi people themselves - use the latter, the term Manangi will be used to refer to people of this community.

Aside from ethnic peculiarities, the region is exceptional in many aspects. The geography is spectacular. Annapurna I (8,091 m) and Annapurna II (7,939 m) - the world's 10th and 16th highest peaks respectively – both lie within the district's borders and the high alpine surrounding has always played a decisive role in people's lives (Messerschmidt, Gurung, & Klatzel, 2004).

To understand the current situation, the livelihoods and the adaption that followed the construction of the road, it is an indispensable necessity to have a close look at the geographical setting, the socioeconomic history, and the cultural characteristics of the study area. The following chapters aim to deliver the background knowledge that is required to understand and analyse the current developments and situation.

4.1 Geographical setting

The Eastern compartment of the ACT follows the valley of the Marsyangdi valley from Besisahar up to the Thorong La pass (5,416 m). The lower parts up to 2,000 m lie within the subtropical vegetation zone (Łach, 2015). This scenery changes once Nyishang is entered and the subalpine zone is reached. Nyishang is a U-shaped valley running Southeast to Northwest at the northern side of the Annapurna massif. This location in the so-called *trans-Himalayan region* accounts for the low amounts of yearly precipitation³¹. This shortage in precipitation in combination with the high altitude and the steep terrain have restrained the agricultural productivity of the land from the times where people began to settle in Nyishang in the 7th century (Rogers, 2004b). Out of the 2,242 km² of the district, only 0.48% are suitable for agriculture and 22,50% can be used as pasture (NTNC, 2008). Most agriculture is concentrated on the warmer south-facing slopes, whereas the north-exposed slopes are covered with forests of *Pinus wallichiana*, *Betula utilis*, and *Abies spectabilis* until the timberline is reached at 4,000-4,300 m (Bhattarai, Vetaas, & Grytnes, 2004). The rich

³¹ The numbers on the annual precipitation vary in different publication most of them assume 400 mm as mean annual precipitation (Veetas, 2008)

flora of the region has always been used by the Manangis, who sell non-timber forest products (NTFP) for ethno-medicinal and commercial purposes (see *Chapter 4.5.3.2*).

The main river of the valley is the Marsyangdi which is fed by several mountain streams. The huge hydroelectricity potential is partly exploited further downstream by two hydroelectric power plants. The older middle Marsyangdi hydroelectric plant (72 MW) went online in 2008 and was built with the support of the German Federal Ministry for Economic Cooperation (BMZ) and the KfW Entwicklungsbank (Hydroworld, 2008). The upper Marsyangdi hydroelectric plant (50 MW) is still under construction. It is the first hydropower project in Nepal that is funded by direct investment from China (Harris, 2016). Another one is planned in cooperation with India and will be situated entirely in the Manang district (HHPCL, 2012).



Figure 15: Typical scenery in Manang with hotels at lower left and Mt. Gangapurna (7,455 m) with Gangapurna glacier in the background.

4.2 Evolvement of different livelihood strategies

There are three livelihood options in the region that evolved consecutively namely agriculture, outmigration, and trade - and finally tourism. They developed over centuries and all of them coexist at present. The following section gives an overview of the historical evolvement of Manang's livelihood patterns.

4.2.1 Agro-pastoralism

The geography of the region is the starting point for an analysis of the changing livelihood adaptations of the Manangis. The combination of animal husbandry, agriculture and forest resource use is the traditional adaptation strategy to these harsh conditions, and can be regarded as the native livelihood pattern. During the short vegetation period, potatoes, buckwheat, barley, and wheat are cultivated on the fields surrounding the villages. The livestock (goats, yaks and horses) is kept on the high mountain pastures during this time and are brought down at the beginning of the harvest season. Despite the elaborated adaptations of these strategies to the environment (irrigation systems, management of common pastures etc.), the agricultural production could at no time ensure food security for the whole year (van Spengen, 1987). On that account, the Manangis had to support their livelihoods with additional resources from trade. The following section describes the emergence of the Manangis as a successful business community³².

4.2.2 Trade and outmigration

Pre-1960s: expansion of seasonal trade

Since climate and geography limit the agricultural season to around six months, the Manangis had enough time during the non-agricultural winter to barter NTFPs, animal skins, and other resources for other goods with the inhabitants of the lowlands who produced abundant food. Over the years, the Manangi traders were able to widen the scale of their ventures in the search for profitable trading terms. The gradual expansion of their trading ventures was facilitated by certain advantageous factors. The most important one was royal privilege that allowed Manangi traders to travel freely throughout the country without having to pay taxes. This privilege from 1784

³² For detailed accounts of the socioeconomic history of Manang see Rogers, 2004a; Rogers, 2004b; van Spengen, 1987 and Cooke, 1985.

was granted to ensure the loyalty of the Manangis to the Nepalese kingdom and facilitated their rise as opportunistic itinerant traders. Until the 1960s, the Manangi economy was still based on subsistence farming and herding, supplemented by the trading activities. Although the trading ventures extended to places as far away as Burma, Thailand, and Malaysia, the community remained relatively poor (Snellgrove, 1961).

1960s & 1970s: international trade & outmigration

This changed drastically when the Nepalese government issued passports to the group in 1962³³. With little competition from other Nepalis and special custom tax concessions, the Manangis expanded their trading network by taking advantage of several factors (Rogers, 2004b; van Spengen, 1987):

- Government programs to promote international trade
- Minimal trade restrictions in the markets of Thailand, Malaysia, Singapore, and Hong Kong
- The establishment of international airline connections between Kathmandu and Southeast Asia
- Kathmandu's emergence as a centre for the South-Asian black market (especially the trading of luxury consumer goods which found their way across the open border to the Indian black market was highly profitable)

³³ The Manangis were the first ethnic group to obtain Nepalese passports. There explanation for that illustrates how such a remote valley like Nyishang is linked to large-scale developments and geopolitics. After the occupation of Tibet by the Chinese, many Tibetan resistance fighters (*Khampas*) used Manang as a base to launch their guerrilla attacks. The *Khampas* were heavily armed and supported by the USA to combat the spread of communism. To defend themselves against the unpopular *Khampas* who repeatedly raided the villages, the Manangis as well armed themselves. When the relationship between the USA and China improved in the mid-1970s and the government of Nepal put an end to the *Khampa* movement in the region, King Mahendra of Nepal feared the existence of armed mountain dwellers at the periphery of his empire. To ensure their loyalty and allegiance and to strengthen Nepal's trade connections with Southeast Asia, the King made passports available to the Manangis in exchange for the disarmament (Messerschmidt, Gurung, & Klatzel, 2004 Rogers, 2004b).

Subsequently, trade became a highly capitalized, year-round occupation and led to a massive outmigration of Manangis to Kathmandu (see Figure 16) where the successful entrepreneurs further intensified and diversified their business ventures into hotels and shops. By the year 1991, the population of Nyishang has declined by 60% and up until today the total out-migration of Manangis is estimated to be 70%, despite the growing population after 1991 (Chapagain, 2016).

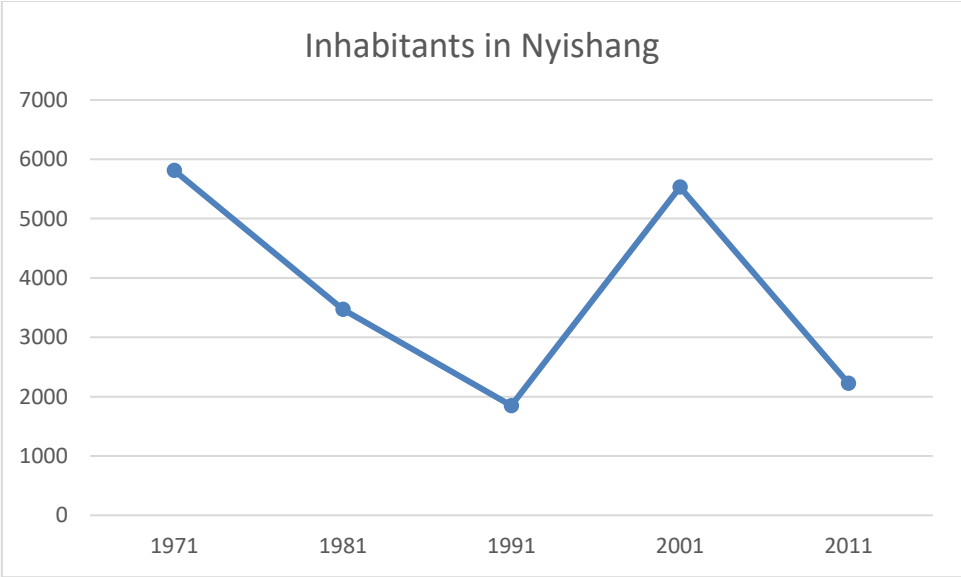


Figure 16: Changing population size in Nyishang. Data compiled from Nepal population census 1971, 1981, 1991, 2001 and 2011.

The bi-locality of the community, especially the out-migration of young, ambitious talents to Kathmandu enhanced the economic imbalance within the Manangi community. But still, the relations between the two Manangi groups remained notably close. Manangis residing in Kathmandu maintained a strong communal identity, held onto their land in their natal village, took interest in village matters and had an important say in local politics. One important factor that contributed to the cohesiveness of the community was the establishment of the *Manang Samaj Sewa*

*Samiti*³⁴ and the construction of several religious monuments in Kathmandu. Through the creation of a “home away from home”, the Manangis were able to preserve some important cultural features (Subedi, 2008).

4.2.3 Tourism

The next important development was the expiry of their special trading permits in 1976. The discontinuation of the privileges are explained with growing public criticism of the favourable treatment of particular ethnic groups and the Manangis’ involvement in illegal trade, which contributed to the groups’ notoriety (van Spengen, 1987). The resulting competition especially hurt the smaller-scale traders. However, the Manangis were provided with a new commercial perspective right in the next year.

Early years of tourism and turnaround-migration

After being a restricted area, the government opened the region for trekking tourism in 1977. That was part of the government’s strategy to promote tourism as a promising economic sector. This new commercial opportunity first seized by Manangis who possessed land adjacent to the new trekking route, but generally the contact with foreign tourists was something the Manangis had to become accustomed to in the first place (Subedi, 2008). Because of the accounts of early visitors, the Manangis had earned quite a reputation for being inhospitable and unfriendly. This attitude changed remarkably in the years after 1977, also because of the increasing integration of the Manangi community into the mainstream Nepalese society (Rogers, 2004b). With growing tourism arrivals in Nepal and in ACA (see Figure 16), the investments in tourism infrastructure grew gradually. There are

³⁴ The Manang Welfare Society plays a decisive role for the Manangi diaspora in Kathmandu. By organising religious and traditional festivals the distinct Manangi culture is kept alive. Some features of the culture are seen as important factors for the entrepreneurial success of the group, for example several mechanisms of economic cooperation and redistribution of wealth among the community, religious partonage or the taboo of selling land to outsiders (for more details see Rogers, 2004b).

several factors contributing to the rise of Manang as a tourism destination. On the one hand, the preconditions were perfect, the region boasts unique cultural and scenic beauty, and especially after the establishment of ACAP and the efforts to promote trekking tourism, the ACT was soon considered one of the most enjoyable trekking tours in the world (Subedi & Chapagain, 2011).



Figure 17: Tourist arrivals in Nepal and ACA from 1985 to 2011. Data compiled from Chapagain, 2016; GoN, 2016.

On the other hand, the trading and living conditions for many Manangis had worsened in Kathmandu and they began to turn their attention towards the new business opportunities in the valley. At that time the Manangis were already the second largest group of hotel owners in Kathmandu (Morimoto, 2003 cited in Subedi, 2008). Since the successful Manangis who migrated to Kathmandu had largely held onto their land possessions in Manang, they could use their capital and business expertise to profitably invest in hotels and other tourism related businesses at home (Rogers, 2004b). The investment of fresh capital increased the quality of facilities and services of newly established hotels, forcing older hotels to improve and invest to remain competitive. The perspective of a growing tourism industry led to a back

migration of whole families from Kathmandu to their remote homeland. Coupled with the migration induced by the increased labour demand in the tourism sector, the trend of a growing population in a remote mountain district is unique in Nepal (Subedi, 2008).

Civil War times

The tourist numbers kept growing gradually in the subsequent years, reaching a temporary climax in 2000. After that, the decade-long Civil War in Nepal resulted in a general decline of tourist numbers in the whole country (Baral, 2014). During the Maoist insurgency (1996-2006), the rebels had considerable parts of the ACA under their control, killed local conservation leaders, and exploited natural resources. In the region the conflict lasted from 2001 to 2006 (Baral, Stern, & Heinen, 2007). After the end of the insurgency tourism numbers continued to grow again quickly (Baral & Heinen, 2005). The effort of ACAP to promote trekking tourism was decisive for the resilience of the tourism system and helped to rapidly recover from the collapse (Baral, Stern, & Heinen, 2010). Another important factor was that tourists continued to visit ACA even during the insurgency. This can be attributed to the fact that no tourist was seriously harmed during the whole conflict (Baral et al., 2010).

After the Civil War until road construction

In the years after the Civil War, the ACA regained its position as Nepal's most popular trekking destination. As shown in Figure 18, the arrivals grew steadily in the years after the Civil War.

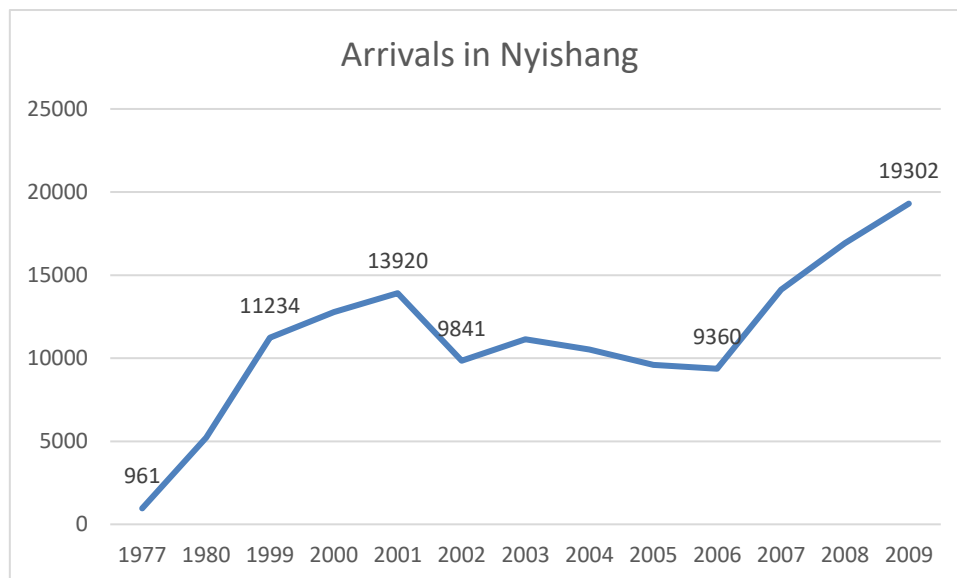


Figure 18: Tourist arrivals in Nyishang. Based on ACAPs local office in Manang cited in Chapagain, 2016.

The ranking of tourists by nationality from 2007 shows the dependence on Western countries as source markets for incoming tourists (see Table 5).

Country	Number	Percent
France	2,378	16.8
Israel	1,909	13.5
Germany	1,672	11.8
United Kingdom	1,290	9.1
United States	840	5.9

Table 5: Tourists by nationality in Manang. Based on ACAPs local office in Manang, cited in Subedi & Chapagain, 2011.

Out of the top 14 countries of origin 13 are Western countries and only one is an Asian country (South Korea with 277 visitors). The dominating group of visitors were young male persons³⁵, which underlines the prevalence of trekking tourism.

³⁵ In 2003 44,4% of the visitors in Manang were between 20 and 29 years old. Altogether 71% of the visitors were under 40 according to Subedi (2008).

Despite being regarded as a best practice example of the use of ecotourism for sustainable development and conservation (see e.g. Williams et al. 2002; Schuett et al., 2016), the growing numbers of visitors and the booming tourism failed to benefit the population at large (Wells, 1994). While the hotel and shop owners in the villages along the main trail of the ACT were bestowed with economic opportunities, the costs and benefits of tourism were not equally distributed within and between different communities in the region (Bajracharya, 2015; Schuett et al., 2016). Apart from that, the newly created jobs did barely benefit the local communities because most of the qualified personnel was recruited from elsewhere (MacLellan, Dieke, & Thapa, 2000). Another concern was the growing demand for construction timber and firewood and the resulting pressure on the valley's forests. Among the villages on the trek, Manang has become established as an important station. Most trekkers spend more than one night in Manang to rest and acclimatize.

Both dominant livelihood strategies in Nyishang are characterized by seasonality. Unfortunately, the peak seasons of tourism and agriculture coincide with each other, resulting in increased workload during spring (March-May) and autumn (September-November). Until 2010, there has been no road connection in the region and the ACT started in Besisahar, where the visitors began their trek up to the Thorong La pass. This situation changed when the road from Besisahar to Chame was started to be constructed.

4.2.4 Recapitulation

The previous chapter described how and why the livelihood patterns in the study area evolved and changed in the course of time. First, there has been a combination of agriculture and livestock herding, supplemented by the small revenues of seasonal trading ventures during the winter. This trade gained importance due to certain privileges and the entrepreneurial talent of the Manangis. The resulting outmigration to Kathmandu led to land abandonment in Nyishang. But due to cultural reasons, the land wasn't sold. When the region was opened for visitors in 1977, tourism slowly grew along the ACT and experienced a boom in the second half of the 1990s. The deteriorating trading and living conditions in urban Kathmandu and the tempting

prospects of business opportunities in Nyishang led to a back migration and to professionalization and diversification of tourism facilities in Nyishang - particularly in Manang - the main hub of tourism in the region. Up to this point, Nyishang was a typical trekking destination, characterized by strong seasonality and a Western-dominated visitor structure. A turning point in the development of the region was the increasing road construction activity in the region starting around 2010. The three presented livelihood strategies are adoptions to, and results of the geographic circumstances and the related remoteness of the region. How the road connection effected tourism and other spheres are the main questions that the thesis at hand aims to answer.

4.3 Road construction on the ACT

The previous chapter illustrated how road construction marks a watershed in the development of the region. Before the main issues concerning road construction can be analysed and discussed, some basic questions must be clarified. This chapter first gives an overview about the historical sequence of road construction in the wider region to provide a chronology and a context for analysis. After that, the Chame-Kangsar road is briefly introduced. The end of the chapter is dedicated to the rationales behind, and the justifications for the construction of the Nyishang road.

4.3.1 Historical sequel of road construction in the region

The road between Chame and Khangsar that ultimately connects Manang with the Prithvi Highway was built in stages over the years. This section is the study subject of the research (see Fig. 14 on p. 64). For the sake of simplicity, it will be referred to as the Chame-Kangsar road hereinafter. The development of the lower road segments contributes to the wider understanding of road construction in the eastern part of ACT and thus must be mentioned, but the in-depth analysis will be limited to the Chame-Kangsar road.

The first road segment links the district headquarter of Besisahar with Dumre and was completed in 1986 (Full Bright Consultancy, 2000). In 1992, the next section to Chame was started to be constructed. Due to the steep terrain and the political instability, the Nepalese Army was entrusted with the construction. It wasn't until 2012, that the road finally reached Manang's district headquarter at Chame (Sharma & Ghale, 2012). From there, the construction of the Chame-Kangsar road started in 2013. Because of the wider and flatter topography of Nyishang compared to the sections in Lamjung district and lower Manang, the construction proceeded faster. The first jeeps reached Manang in 2015 (Lee, 2015). The construction of 97 km of road from Besisahar to Manang took 23 years in total, involved heavy blasting and claimed the lives of at least twelve construction workers³⁶.

4.3.2 The Chame-Kangsar road

The road from Chame to Khangsar climbs from 2,620 m to 3,850 m. It winds through the whole wider study area of Nyishang until it reaches the main destination of Manang and then further proceeds to Khangsar. Table 6 lists some basic information on the road. The impacts that this road has on the communities on the way up but especially on different social groups within Manang village are the central focus of the thesis at hand. The complex and confusing field of actors involved plus the multitude of conflicting interests during the planning and construction of the road are briefly presented in the following section without any claim of comprehensiveness. Many of the information given is of little relevance for the analysis of impacts on the local level but indispensable for placing the findings in the context of road construction and poverty alleviation in Nepal.

³⁶ There is a memorial for the deceased workers on the roadside.

Official name of the road	Chame – Khangsar road
Length	35.22 km
Classification	Rural road class A (See <i>Chapter 2.3.2</i>)
Project costs	NPRs 275,448,004 (\approx 2,541,000 US\$)
Cost per km	NPRs 7,820,784 (\approx 72,160 US\$)
Employment generation	159,897 person-days (unskilled and skilled)

Table 6: Basic information on Nyishang road construction project. Based on Government of Nepal, 2010.

There are several actors involved in the processes of deciding, planning and execution of road construction projects in the region. Because the central focus of the thesis is on the impacts of road construction they will be introduced just briefly.

The proponent of the road construction project was the DDC of Manang District. The road is a subproject of the Rural Reconstruction and Rehabilitation Sector Development Program (RRRSDP) for which the government has received financial support from ADB, DFID, SDC, and OPEC Fund for International Development (OFID)³⁷. The donor site is essential for the planning and funding of the road, but on the local level they are not amongst the most influential actors. Local politicians have to ensure that a necessary majority of the population is in favour of a proposed project, mitigate and manage emerging conflicts and negotiate road alignment with the executing contractors. In this case, the difficult segments of the road were constructed by the army, whereby many other parts were constructed autonomously by the adjacent villages or by private businessmen (see Box 2). The road lies entirely within the borders of ACA, therefor ACAP takes an observant role, trying to safeguard their conservation interests (see Box 1).

³⁷ The biggest share is contributed by ADB with 50 million US\$, followed by DFID (20 million US\$), the government of Nepal (15,7 million US\$), OFID (10 million US\$) and SDC (1,5 million US\$) (ADB & GoN, 2008; ADB, 2008)

4.3.3 Rationales

According to Government of Nepal (2010), the RRRSDP focuses on “immediate post conflict development priorities for accelerated poverty reduction and inclusive development, thereby enhancing the effectiveness and efficiency of the delivery of public services, and improving access of rural people to economic opportunities and social services.”

Moreover, the official announcements include a detailed list of expected positive and adverse impacts. A selection of expected impacts relevant for the analysis and interpretation of the research results is presented in Table 7.

Impact	Scope	Durability
Employment generation and increase in income	Local	Short-term
Skill enhancement	Local	Long-term
Improvement in accessibility and saving of time and transportation cost	Regional	Long-term
Appreciation of land value	Local	Long-term
Women and indigenous people empowerment	Local	Long-term
Increase in trade, commerce and development of market	Local	Long-term

Table 7: Overview of expected positive impacts of the Nyishang road. Based on Government of Nepal, 2010.

The planners also expect some negative impacts to accrue. Generally, it is assumed that there will be fewer negative impacts and most of them are environmental in nature (see Table 8).

Impact	Scope	Durability
Slope instability	Local	Short to mid-term
Disturbance in natural drainage patterns, water logging and water pollution.	Local	Short-term
Air, noise and water pollution	Local	Long-term
Loss or degradation of forests and vegetation	Local	Long-term
Disturbance of wildlife and illegal hunting	Local	Long-term

Table 8: Overview of expected negative impacts of the Nyishang road. Based on Government of Nepal, 2010.

The construction of the road is generally justified with the expected positive socioeconomic impacts on the local population. Thereby poverty reduction and positive effects on women, indigenous people (it is not clarified who exactly falls under this category) and disadvantaged people like Dalit are stressed. Adverse environmental effects are assumed to be manageable (Government of Nepal, 2010).

4.4 Summary

The inhabitants of Nyishang have adapted to the physical limitations of their homeland in a number of ways, resulting in different lifestyles and livelihood strategies. The latest was a composition of trekking tourism and the traditional agriculture and pastoralism. The former benefitted from the pristine remoteness of the region. Trekking tourism thrived after the end of the civil war and brought considerable wealth for parts of the community. Because some members of the community started their business with a financial advantage from previous trading activities, large parts of the population could not participate in the growing tourism sector and remained excluded from direct earning opportunities. The resulting prosperity gap between tourism entrepreneurs and farmers was considerable, but

cultural norms and mechanisms of religious patronage and social welfare ensured a certain level of economic redistribution within the community. The road construction represents a profound caesura in the development of the whole region. As illustrated in *Chapter 1.3.3*, rural road construction has impacts on different levels and various spheres. This chapter outlined the conditions and circumstances in the study area before the road reached Nyishang and Manang. In the subsequent sections, the findings from the fieldwork will be presented and interpreted.

5. Results

Because of the inductive nature of the research process, I present my results and the interpretation analogous to my actual working procedure (see *Chapter 2*). This aims to enable the reader to comprehend how the data was gathered and how conclusions were drawn from the results. Following the logic and the chronological sequence of the research project, the results will be presented from the general to the specific. Except for one short chapter in the work of Beazley and Lassoie (2017), there are no scientific publications on the road. Because the previous knowledge available is limited, the first part of the chapter is dedicated to the clarification of fundamental issues concerning the broader study area. Because the road follows the Marsyangdi valley from Besisahar up to Manang and this is congruent with the first stretch of the ACT, this region will be the geographical unit for the clarification of the basic questions, regardless of the fact that the impacts vary greatly within this broad region. At the very outset, there will be a description of the actual road itself and observable environmental effects. This part also deals with the observable effects that apply to all people in the region, regardless if they were in favour or against the construction. As will be shown, the effects apply to all inhabitants in the region, but still the adoption, the use and the accruing benefits are not equally distributed. The next section will shed light on the planning and construction process, introducing the different interest groups and their decision-making power and institutional backgrounds.

The second major part of the chapter deals with the effects of road construction in the case of the village Manang. The impacts of the road and the following adoptions of the different interest groups will be subject to detailed scrutiny. The case of Manang is both exemplifying many tendencies that are relevant in the whole region and it's featuring unique aspects due to its special settings. Put simply, the impacts of the road on a village community vary the greatest between the people that are involved in tourism and the people who are not. Because it was not possible to analyse the arising questions for the whole region, I decided to take Manang as a case study for these issues.

To ensure the anonymity of the interviewees, they have been coded according to their expertise and numbered consecutively following the categorization introduced in *Chapter 3.2.1*. (see Table 9).

Encoded	Categories
ACAP	former and actual employees of ACAP
GO	Regional/local Government representatives
NGO	Members of international/national or regional NGOs
LP	Local politician
TA	Tourism associated actors (tour guides, representatives of associations)
HO	Hotel owner
NT	Non-tourism actor

Table 9: Encoded categories of respondents

5.1 Introducing the road: condition and operation

Chapter 4.3 already described important features of the road that can be found in the shown sources. This chapter aims to give a more detailed impression of the road with data gathered in the field. Figure 19 gives an impression of the physical appearance.



Figure 19: Impressions of the road (1): The road between Bahundada and Tal; (2): Ongoing road construction after Bhratang; (3) Landslide on the road; (4) Jeeps in Manang.

Physical appearance and environmental effects

The road is mostly earthen except for some short passages near the hydropower plants. As shown in picture (1), the road follows the Marsyangdi River and is edged by steep slopes. The width ranges between 3 and 5 meters, allowing only one vehicle at a time during most passages. The overall quality is poor - the road is filled with potholes and crosses several waterfalls and minor streams. The fieldwork was conducted at the end of the monsoon season, it is expected that this situation is less severe in the pre- and post-monsoon months. The monsoon also increases the landslide activity in the region. As exemplified in picture (3), there are several landslides and mudslides in different magnitudes, especially in the lower parts where monsoonal rains are more extensive. Picture (2) shows the removal of a recent

mudslide, triggered by heavy rainfalls. The ongoing construction and maintenance works involve heavy machinery and are carried out by workers from other districts. This was reported by all the workers that were interviewed along the road³⁸. In the higher parts of Nyishang, the dust pollution is more severe due to the dry conditions. Picture (4) shows jeeps on the parking area in Manang. The dry landscape can be seen on the picture. The increased level of dust and noise pollution was mentioned by many respondents as a negative impact. Furthermore, several interviewees – especially those working for ACAP – alluded to the clearance of adjacent forests during the construction and to increased wildlife disturbance due to honking and traffic noises. The construction methods were criticized by a number of respondents as being environmentally detrimental. One ACAP official stated that “the road was built in the cheapest way without prior consultation of geologists or engineers” (interview with ACAP 2). This assessment is corroborated by the impressions gained from walking on the road. At one of the steepest sections of the road, a sign (in Nepalese) commemorates the three army soldiers and nine construction workers who died during the construction.

Transportation system

The road conditions currently allow vehicles to travel with an average speed of 8-10 km/h. Traffic volumes were generally low, but are expected to be substantially higher during the peak tourist seasons. Between Besisahar and Syange, a bus is operating and from there on only jeeps and motorbikes can drive on the road. The road reduced the required time to travel drastically. Without the road, it took at least 4 to 5 days to reach Manang from the end of the road in Besisahar today, it is possible to cover this distance in one long and strenuous day (\approx 12h). The costs for this journey range between 1,500 NPR (\approx 14 US\$) and 2,500 NPR (\approx 23 US\$) for Nepalese and 5,000 NPR (\approx 46 US\$) and 7,000 NPR (\approx 65 US\$) for foreigners, depending on the

³⁸ Of the five workers that I interviewed, five came from other hill districts. They also reported that their colleagues came from other parts of the country.

status of the road. The transportation costs for goods have also been reduced from 80 NPR (0,75 US\$) per kg to 15 NPR (0,13 US\$) per kg (LP 1). The transportation system is controlled by a syndicate which determines the prizes. According to various sources, this committee has established a monopoly on the transportation of people and goods in the region and does not allow any competitor to operate a business on the road. The cars are mostly in a questionable state, heavily overloaded and driven by young men (NGO 5). The dangerous alignment and the poor condition of the road in combination with the inexperienced drivers result in deadly incidents every year³⁹.

5.2 The broad picture: Who, Why, How

As laid out before, the region is ranked as one of the best trekking destinations in the world and the management of trekking tourism and conservation was considered exemplary. Unlike in other remote regions in Nepal, there has been an established successful local economy before the region was accessible by road. The first question that I asked myself when I decided to do research on road construction in the region was: who wanted the road to be constructed and why?

5.2.1 Political enforcement

The road construction up until Chame was constructed as part of the government's poverty reduction strategy of the 10th 5-year plan (2002-2007). As indicated in *Chapter 2.3.1.*, the goal was to link all district headquarters to the SRN. For the road beyond Chame (the Chame-Kangsar road) the political background was less

³⁹ There were at least three tragic accidents in 2017. Two months before my field trip two people were killed and ten were injured when their jeep fell off a steep hillside near Pisang (My Republica, 2017b). Another accident happened in September killing one and injuring 13 (My Republica, 2017a) and in October one Israeli tourist died and 11 others were injured (The Himalayan Times, 2017a)

obvious. Nevertheless, there was a general consensus among all the respondents concerning the question of who wanted the road. According to them, the share of the population that was not profiting from tourism was in favour of the road. The percentage of this part of the total population was estimated by most of the interviewees to be ranging between 80% and 90%. They formed a strong lobby assuming several positive effects like enhanced mobility and better access to markets. The local politicians took this demand to the government level and provided the necessary funding. Besides meeting the desires of their voter's, the local politicians pursued personal interests. The politicians belong to the local elite, they are well connected and mostly successful businessmen (ACAP 1). The case of the apple farm in Brathang exemplifies the interweaving of politics, business and the road construction (see Box 1).

Box 1: Apple farm in Bhratang

The apple farm in Bhratang is located at 2850 m.a.s.l. between Chame and Pisang. It is run by Agromanang Pvt. Ltd. whose owner is Polden Chhopang Gurung – a newly elected member of parliament for the communist party of Nepal (UML) - who in turn is the brother of Tripple Gurung, a local politician, hotel owner and chairman of the Manang Samaj - the influential Manang youth club in Kathmandu (see footnote 33). The farm was founded in 2014 with an initial investment volume of 250 million Nepalese Rupees (NPR) (≈2,345 million US\$). The funding was partly supported by the ADB with 23 million NPR (≈215 000 US\$). At the time of my visit, 62 000 apple trees of three different varieties were cultivated. The plantation is equipped with modern dripping irrigation system, newly constructed cold storage houses and factory-fresh sorting and processing machines from China. Furthermore, a cottage style hotel was under construction that will outmatch the rest of the other hotels in the region regarding comfort and amenities. The target market for the hotel is mainly domestic tourism (S. Gurung, personal communication, September 9th, 2017). The construction machinery was also used to build the road, without which the expected harvest for 2017 of 350-400 tons of apples could not be brought to the market in Pokhara. The owners of the apple farm acted in three different roles. As local entrepreneurs with a strong interest for road connection, as politicians with a strong say in regional development issues and as constructors who used their machinery for carrying out the work themselves.

The political decision-making process was very exclusive and fast. One government official describes it as follows: “The whole history of construction is highly top-down. The politicians decide and then it is build. One thing is very important. If ACAP does not want this road – then that’s its’ part. But the business and the politicians endorse the plan and ACAP and other local offices cannot stop the politicians. On the high-level approach, you cannot stop the politicians. They bring the projects, the plan and

the money and the people don't know what is going on. So there will be a road and the people who are agitating against it – they have to accept even if it brings disadvantages for them (quote GO 1) [sic!].”

5.2.2 Role of ACAP

This quotation points out several important factors in this context. Firstly, the role of ACAP in the planning and implementation and secondly the existence of people who were against the construction. As mentioned before, the whole region is part of the ACA which is managed by the NTNC/ACAP (see Box 2).

The role of ACAP in the road construction is characterized by conflicting interests and a weak position compared to the political leaders. On the one hand, they opposed the plans to build the road to Manang because it posed a threat to the trekking tourism industry and to the natural environment (ACAP 2). On the other hand, they work for and together with the local communities and must meet their demands. ACAP worked on suitable solutions that would satisfy both sides and limit the environmental impact, but were disregarded in the planning and execution process. Their advices and objections were ignored both by the donors and the executing authorities.

For example, one ACAP official reported that ACAP tried to insist on the proper execution of an environmental impact assessment (EIA) prior to the start of construction. According to him, the assessment was just prepared as a matter of form and the publication has been mostly unnoticed. Another respondent called the EIA a “joke” (NGO 4). When ACAP expressed their conservation concerns they were blamed to be “anti-development” (ACAP 4).

Box 2: Annapurna Conservation Area Project (ACAP)

The ACAP was launched in 1986 by the National Trust for Nature Conservation (NTNC), previously known as the King Mahendra Trust for Nature Conservation (KMTNC). It is the first and largest conservation area in Nepal. The ACA covers an area of 7,629 km² of highly diverse physiography (Bajracharya, Furley, & Newton, 2006). The high altitudinal range (790m – 8,091m) and the segmented topography provide habitats for 1,226 species of plants, 472 bird species, 21 species of amphibians, 32 species of reptiles and more than 101 species of mammals (Inskipp, 1989). Among them are rare and endangered wildlife species like the snow leopard (*pantera uncia*) and the musk deer (*Moschus chrysogaster*) (Banskota & Sharma, 1995). Apart from the rich biodiversity, 120,000 people of different ethnic communities and castes live in the ACA. Because most of them are dependent on the natural resources, ACAP chose a participatory, community-based approach to combine conservation and development (Baral, Stern, & Bhattarai, 2008). Tourism plays a central role in this regard. The entry fees collected from tourists are reinvested in development projects (alternative energy sources, forest protection, empowerment, education projects etc.) in the villages (Nepal, 2000). In the context of road construction ACAP is facing a balancing act between nature protection and the combined development objectives.

As described in Box 2, the physical environment in which the road was constructed is highly diverse and sensitive. Nevertheless, the top-down nature of project implementation in Nepal enabled the ignoring of the responsible conservation authority. ACAP tried to mitigate the negative environmental consequences by proposing environmentally friendly construction methods and a road alignment that leaves the existing trails unharmed. Already in 2008, they produced a sustainable

development plan for Manang which was partly funded by UNEP that gave detailed recommendations for actions (NTNC, 2008). Their findings and suggestions were not integrated in the planning by the national planning commission, the concerned ministries and the donor agencies. According to my respondents, the exclusion of ACAP in the planning and execution of the road construction on their own administrative area can partly be ascribed to a loss of significance since the NTNC took the responsibility from the KMTNC after Nepal officially abolished the constitutional monarchy in 2008. The KMTNC used to be under the patronage of the King himself and the NTNC now operates under the ministry of forest and environment (ACAP 3). Since 2008, there have been eleven different Prime Ministers and the political orientation has changed permanently along with the changing political rulers.

As a reaction, ACAP is now trying to advocate new business opportunities in the region like mushroom farming or small-scale apple orchards. They also work hand in hand with other associations to promote alternative trails that avoid the road.

5.2.3 Tourism associations

There are three associations that represent the interests of the tourism businesses in the region:

- Pokhara tourism council (PTC): Pokhara is the main hub for all touristic activities in the province. The PTC promotes trekking tourism and other forms of tourism.
- Trekking Agencies Association of Nepal (TAAN): TAAN is the biggest lobby association for trekking tourism in Nepal. They are also involved in the construction and maintenance of trekking tourism infrastructure like trails and regulate the permit system for trekking destinations.

- Nepal Tourism Board (NTB): NTB is a semi-governmental organisation promoting Nepal as a tourist destination nationally and internationally.

All representatives of these three organisations that I spoke to expressed similar views concerning the road construction in Manang. They were not against the road in general because they see it as an important improvement for the rural population, but all of them opposed to the way decisions were taken and the way the road was constructed. All of them saw the brand value of the core product in the region heavily damaged. The PTC and the TAAN tried to convince the decision makers to implement methods that mitigate and minimize the impact on the landscape and protect the trails, but their objections were unheeded. The NTB was not consulted at all. According to the regional manager of the NTB in Pokhara, the responsible politicians now admit that this was a mistake and now the NTB is entrusted with the mitigation of the damage. The NTB is now trying to install a network of alternative trekking trails called New Annapurna Trekking Trails (NATT) which avoid the road. All of the respondents regarded the road construction as a big threat for trekking tourism. They see the biggest impact in the loss of natural beauty and the unattractiveness of walking on a dusty road while being overtaken by horning jeeps. This is discussed in numerous internet trekking forums and has led to a falling popularity of the ACT⁴⁰. The impact that the road has on tourism on the east side of the ACT will be discussed in the next chapter.

5.3 Impacts on tourism

This chapter elaborates on the impacts that the road has on tourism in the region. At first, general trends in tourism and the role that the road plays in them are described. This sets the scene for a more detailed analysis of differences within the region.

⁴⁰ Many bloggers or trekking tourists express their anger about road construction in the internet or discuss about the loss of beauty. Comments like: “Many believe that the road construction has completely ruined the most beautiful and thrilling trek in the world” are prevalent (Himalayas on foot, 2017). For other examples, see Schulz, (2015), Roux, (2016).

5.3.1 Arrival numbers

All the respondents that work in the trekking tourism industry complained about the negative effects of the road on this particular form of tourism. Nevertheless, the tourist arrival numbers are increasing. Figure 20 shows the development of tourist arrivals in the years after road construction.



Figure 20: Tourist arrivals in ACA from 2011 to 2017. Data compiled from ACAP office in Manang and Royal Mountain, 2018.

The overall trend is very positive despite the sharp drop in 2015 which is explained by the devastating earthquakes that struck the country in this year. The Annapurna region saw very little damages - since the epicentres were located further east - which enabled the quick recovery in 2016 and the record breaking arrival of almost 160,000 tourists visiting ACA in 2017 (Royal Mountain, 2018).

Of the 114,187 tourists in 2016, approximately 24,000 passed through Nyishang and Manang⁴¹. This means that tourists arrivals are still increasing after road construction (19,302 arrivals in 2009). According to the interviewees, the length of stay in the region decreased since the road was built (NGO 2 & NGO 3).

5.3.2 Changing tourism and visitor structure

How do growing tourist arrivals go together with the perceived damage to trekking tourism mentioned by all the experts. According to the interviewees, the visitor structure is changing due to the road construction. The ACT in its original form started in Dumre and later in Besisahar and took roughly 23 days. The road construction and the use of jeeps has shortened the trek to around 11 days (TA 1). According to one informant, the minimum of 5 days is possible, if the trekkers are well acclimatized (TA 2). The shorter amount of time needed to visit Manang is an incentive for less adventure-interested tourists to visit the region. Whereas Manang was “reserved” for people willing to trek for days before, it is nowadays possible to enjoy the high mountain scenery without walking at all. This trend is reflected in the decreased length of stay and the changing visitor structure. According to all informants the most important target groups with growing arrivals in the years after road construction are domestic tourists, Chinese, and people from the South Asian Association for Regional Cooperation (SAARC) countries. This is resembled in the visitor structure of 2017 (see Table 10).

⁴¹ No data was provided by ACAP on entries in Nyishang or Manang but on route-wise tourist arrivals within the whole ACA. The figure of 24 000 tourists was calculated by adding the arrivals of routes that pass through Nyishang (source: ACAP office in Manang).

Country	Visitors
India	32,656
China	11,206
France	10,748
United Kingdom	10,302
USA	10,262
Other countries	83,426
Total	158,600

Table 10: Tourists in ACA by nationality 2017. Based on Royal Mountain, 2018.

Most of the Indian tourists are visiting ACA for religious pilgrimage to the holy place of Muktinath on the Mustang side of the ACT. According to the respondents, Indian tourists play a minor role in Nyishang (ACAP 7). Still, the growing numbers of Chinese visitors in the whole country but also in the Annapurna region are welcomed because China is regarded as a potential growth market in the future by most of the interviewees. But the most significant trend that was mentioned by the interviewees was the increasing importance of the domestic market in Nyishang. In 2016, the unexpected high numbers of Nepalese tourists led to overcrowding and a shortage in accommodations, especially during the Dashain holidays (TA 1 & LP 1). The growing domestic tourism is a recent phenomenon in Nyishang, closely linked to road construction. The road connection allows visitors to either ride the road with their own motorbikes - an activity that is gaining popularity - or to get driven up with a jeep. I spoke to several Nepalese visitors in Manang who stayed only three nights in the region and visited Manang as part of a short vacation. This form of tourism is facilitated by the road and obviously very different from the previously predominant trekking tourism. Whereas the trekking tourism was decentralised and spread out across the whole Marsyangdi valley because the trekkers stayed in another village along their trek every night (except for Manang, where most trekkers stayed two nights), this new form of tourism in the region is mainly concentrated on a few locations. As will be described in *Chapter 5.5.2.*, Manang takes a leading part in this new form of tourism. This has profound consequences for the accommodation businesses between Besisahar and Chame.

The Nepalese tourists are not represented in the arrival statistics since they are not obligated to obtain a permit to enter the region (interview with NGO 5).

5.3.3 Tourism in the lower parts

The possibility of shortening the trek - or even avoid trekking at all - has caused most of the tourists to skip the first days, leaving out several villages in the valley. This has devastating consequences for hotels in the nowadays left-out villages. The loss of business due to the road was mentioned by all the hotel owners that were interviewed. According to one hotel owner in Bahundada, this has already caused several hotel owners to give up their businesses. All the hotel owners that were interviewed in Bhulbhule, Bahundada, Syange, Chyamche, Tal and Dharapani mentioned profit setbacks since the road was constructed. Generally, this effect is stronger in the villages close to Besisahar because they are most likely to be skipped by trekking groups⁴². These villages suffer the most from the road, whereas the hotel owners further up the valley express their hopes concerning the NATTs. The interviewees in the villages between Jagat and Pisang conformably stated that their business was negatively influenced by the road, but that trekking tourism could be revitalized if new alternative trails were established.

5.4 Case study: Manang

The previous chapter gave an overview of the results gathered from the interviews in Kathmandu, Pokhara, and between Besisahar and Manang. The results from the interviews were supported by impressions gained from observation and secondary data.

⁴² Most of the important European trekking agencies start their trek in Jagat or even further up the valley nowadays. For example see the guided tours from the german-speaking market: Hauser Exkursionen, 2018, Weltweitwandern, 2018, Diamir Reisen, 2018; Wikinger Reisen, 2018

The key findings are the following:

- The road's condition is poor, resulting in enhanced landslide activity and costly maintenance. In combination with inexperienced drivers and inadequate vehicles this results in high risk of accidents.
- The transportation sector is controlled by a syndicate preventing competition.
- The initial driver for road construction beyond Chame was the demand of the local population which was not part of the tourism sector.
- The powerful local elite enforced the construction on the political level without integrating or hearing other important stakeholders like ACAP, TAAN or NTB.
- The lack of coordination and planning is regarded as mainly responsible for many of the road's malfunctions and negative impacts on environment and tourism.
- Despite the negative effects in the lower parts, the arrival numbers are growing while the length of stay is decreasing. Facilitated by the road, a different form of tourism is developing, fuelled by the growing domestic tourism and increasing arrival numbers from China.

The following section presents the results from the field work in Manang where some of the impacts differ from the ones described in the last chapter. In the first part, general developments and findings from interviews and participatory observation are presented. The road connection is a very recent advancement in Manang and has varying effects on different social groups. In the subsequent part the perceived and observed impacts of the road and the respective adoptions to these impacts on two major livelihood-groups in the village are described. First, the tourism sector and the results from the survey amongst hotel owners are presented. In the third part of the chapter, the results from the interviews with the non-tourism actors are described.

5.4.1 General impacts and impressions

Manang is by far the biggest settlement in the region and the large number of hotels and shops has led to a binary division of the village. As depicted in Figure 21, the old core of the village mostly consists of residential houses built in the traditional architectural style, whereas the eastern part of the village comprises a strip of hotels, shops, offices, and other buildings. The road bypasses the village in the south.

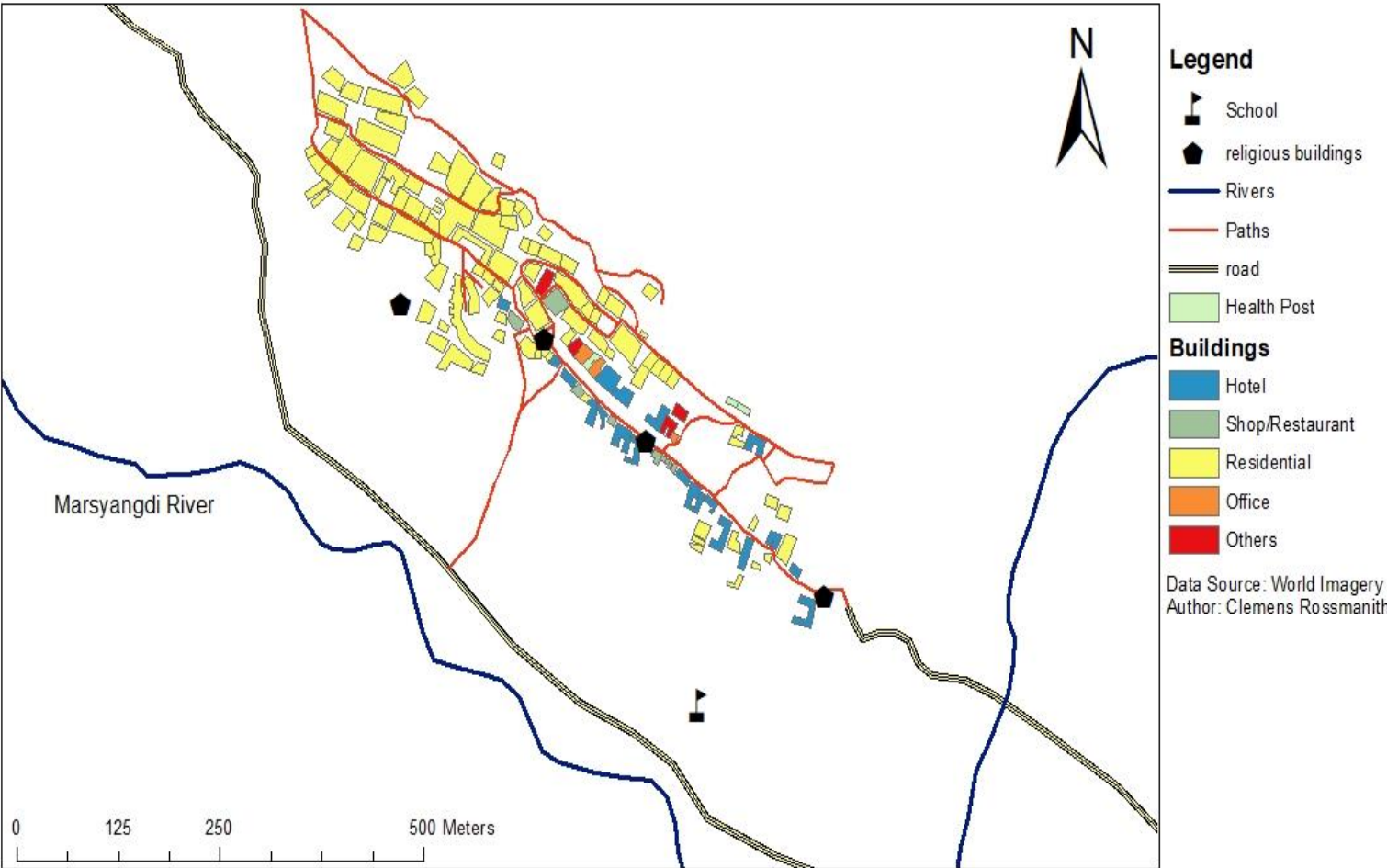


Figure 21: Thematic map of Manang. Based on own mapping.

5.4.1.1 Construction of religious buildings

Especially compared to the other villages on the ACT, the high construction activity is salient. In the village and the surroundings, several Buddhist monuments like *stupas* (construction containing relicts) or prayer walls are either recently finished or under construction (see Fig. 22).



Figure 22: Construction site with stupa under renovation in Manang.

Between Manang and Braga, the *Bhojo Gompa* (monastery) is renovated and a lavish new building is constructed. The sculptors and artists in the *gompa* are from Bhutan, the carpenters are from Bihar (India) and the ordinary workers mostly come from other Nepalese districts. According to the chairman of Manang, all these religious buildings are funded by the community. Every community member donates an amount of money, which can be as high as several million Rupees in the case of wealthy businessmen (LP 2). Several hotel owners stated that this form of religious

patronage is both a cultural peculiarity of Nyishang ensuring that the success of individual community members benefits the whole community and an investment in the future. Cultural attractions and an appealing and picturesque village are believed to enhance the touristic value (HO 3). This was confirmed by another hotel owner who mentioned the competitive disadvantage that Manang has compared to Muktinath, where a holy temple attracts large numbers of pilgrims (HO 12).

5.4.1.2 Health facilities

Manang village has two health facilities. One ACAP health centre with one staff member from the local community and one government health post with four nurses, out of which three are from other districts. According to them, the health facilities on site have not improved since the road construction. The only positive effects they mentioned was the better ambulance transport and the quicker delivery of ordered medicine due to improved transportation. They also reported that the incidents of acute mountain sickness (AMS) have increased since the road has reached Manang. Many visitors are coming from lower parts and cannot cope with the huge difference in altitude between Besisahar and Manang when it is covered by jeep in just one day. According to various sources, this problem is especially prevalent amongst Nepalese tourists.

5.4.1.3 Education

There is one school in Manang. According to a teacher, there are currently 63 pupils in the school, out of which only two are originally from Manang. This can be explained by the many families of migrant workers who are employed in tourism and agriculture in Manang. The Manangi families which can afford it send their children to private schools in Kathmandu, Pokhara, or even India and many very poor families in Manang cannot afford to send their children to school at all because they are much needed workforce (interview with teacher). The Tibetan families in Manang mostly send their children to the Tibetan school (Lophelling Boarding School) in Humde (interview with NT 6).

5.4.2 Tourism actors

It was not possible to access the official tourism arrival numbers but according to one local politician and hotel owner, the total number of foreign visitors in Manang was 18,000 in 2016. Additionally, he estimated that 8,000 and 10,000 domestic tourists visited Manang in 2016 (interview with LP 2). The trend of increasing arrivals was felt by all interviewees. In contrast to the trend in the wider region, the length of stay is increasing in Manang (interview with HO 7). The association of hotel owners in Manang tries to encourage this by offering various activities and promoting day trips on a recently installed signpost in the village. Regarding the tourism sector in Manang, an important fact is that unlike in other tourism destinations in Nepal, the tourism business of Manang is controlled by locals exclusively. None of the hotels in Manang is run by a non-Manangi because selling land to outsiders (even from another village in Nyishang) is culturally prohibited. Cultural norms, religious practice, a strong code of social norms and traditions remain to be important in Manang and are also regarded as potential touristic value (interview with HO 7). In general, the diversification of tourist activities is an important trend in Manang. Concerning future trends for tourism in Manang, most hotel owners mention domestic tourism, adventure tourism with activities like mountain biking or more comfortable forms of accommodation. One young hotel owner even dreamed about a spa hotel (interview with hotel owner from Brakha).

5.4.2.1 Tourism infrastructure

At the time of the survey, there were 16 hotels in Manang. Hotels have between 1 and 4 storeys (average 2.63) with the trend going towards higher buildings. The oldest hotel still operating is from 1983 and the newest opened in 2017. One hotel was still under construction and therefore not included in the survey. Nevertheless, the owner was interviewed and a noticeable fact is that he is the brother of Palden Chhopang Gurung – the owner of the apple farm in Brathang - and Tripple Gurung, a local politician who stood as a candidate for the district elections. Of the 16 hotels 12 have been constructed before 2000 (4 of them in 1997) and 4 after 2000. Almost all

the hotels underwent one or several phases of modernization since the establishment. The investment volumes for the modernization measures ranged between 250,000 NPR (2,320 US\$) and 5 million NPRs (46,500 US\$). The standard is comparably high nowadays. Table 11 shows the amenities that the hotels in Manang offer.

Facility	Yes	No
Hot shower	16	0
Restaurant	16	0
Wi-Fi	14	2
Laundry service	6	10
Shop	5	11
Projector hall or tv	3	13
Bakery	3	13

Table 11: Amenities and services offered by hotels in Manang

The capacity of the hotels (excluding accommodation for guides and porters) ranges between 8 and 54 (average 29.6). In sum, there are 465 beds in common rooms with shared bathroom. Out of the 16 hotels, 6 already offer rooms with attached bathroom. In total, there are 100 beds in rooms with attached bathroom. The prices for these rooms are substantially higher than for common rooms. While common rooms cost between 100 and 700 NPR (average: 290 NPR), the rooms with attached bathrooms cost between 800 and 1000 NPR (average: 925 NPR).

The number of staff (excluding family members) during high season varies between 0 and 10 (average 3.75). Of the total 60 hotel employees only 2 are from Manang. Most common district of origin is Gorkha (13), followed by Kathmandu (8), and Kavrepalanchok (7), and Pokhara (7). The employees are only hired during the two high seasons. The monthly earning is 10,000 NPR (\approx 93 US\$) for a housekeeping staff and 15,000 NPR (\approx 140 US\$) for a chef. The hotels mostly produce the vegetables in kitchen gardens and the quality of the offered food has also increased in the last years (interview with HO 10). The road is also important in this context because it allowed the transportation of two greenhouses (investment of 650,000

NPRS, ≈ 6,000 US\$) to Manang in which capsicum, chillies, and tomatoes are produced in large quantities today (interview with HO 7). The greenhouses belong to one hotel and the products are used in the restaurant and sold in the shop.

Besides the hotels there are 7 shops and 9 restaurants/ taverns in Manang. Because it is compulsory for guests to eat in the hotel, the restaurants/ taverns are mostly frequented by locals or construction workers to drink *raksi*⁴³ or eat snacks. The shops sell everything, from trekking gear to snacks and porter services. Besides that, there are two places where movies are shown with a projector, a snooker hall, and a cultural museum.

5.4.2.2 Attitude towards the road

Out of 16 hotel owners, 10 (62.5%) have a very positive attitude towards the road, most of them stating that the road has led to more tourists in Manang. The role of the domestic market is highlighted by most of the hotel owners, but is not seen as solely positive. Several interviewees stated that Nepalese tourists spend more money during their stay but that they have higher expectations regarding comfort and service in turn. Other positive effects mentioned by several interview partners were enhanced mobility, cheaper prices for consumption goods and better access to construction materials. For instance, the price for rice has dropped from 2,200 NPRs per 30 kg to 1,700 NPRs per 30 kg since the road was constructed (interview with HO 7).

Two hotel owners (12.5%) had a positive attitude towards the road. One of them said that the trekking tourism was influenced negatively by the road. but that the loss is compensated by the growing domestic tourism.

⁴³ Local alcohol made from millet.

One hotel owner stated that his attitude towards the road was neutral. He explained that the road brought economic advantages for Manang but also negative environmental consequences. As a conservationist, he expressed his concerns about possible poaching and wildlife disturbance due to increased visitor numbers.

Three hotel owners claimed to have a very negative attitude (18,8%). These three establishments had a homestay character, offering basic services for low prices (price for double room: 100-200 NPR, \approx 0.90-1.8 US\$). None of the three had employees or attached bathrooms, two did not even offer Wi-Fi. They all stated that the higher expectations and the resulting pressure to offer better services is posing a threat to their business (Quote HO 14: “for the trekking tourists of the past, a hot shower, *Dhal bath*⁴⁴ and a bed was enough, nowadays we cannot compete with the modern hotels”). The owner of a hotel of the first generation reported that she could not keep up with the speed of modernization due to lack of capital (interview with HO 11).

5.4.3 Non-tourism actors

People that belong to the group of non-tourism actors were defined as people who are not benefitting from direct economic effects of tourism⁴⁵ and whose primary source of livelihood is not tourism. It cannot be guaranteed that the interviewed persons are not benefitting from indirect or induced effects at all (for example a hotel owner can spend the money he made from tourism to buy tools from the blacksmith), but generally these effects can be estimated to be minimal. In total, 15 respondents were interviewed.

⁴⁴ Dal bhat is the most common dish in Nepal consisting of rice, lentil soup and curry.

⁴⁵ Economic effects of tourism are differentiated in direct (initial injection of revenue, e.g. payment of a hotel bill), indirect (second round of spending the initial earning, e.g. purchase of local food by the hotel owner) and induced effects (further spending by the recipients of the direct/ indirect effects, e.g. purchase of tools by the farmer who sold his products to the hotel) (Williams, 2009)

5.4.3.1 Socioeconomic characteristics

The households visited were very different from each other. The interviews were conducted with either the father or the mother in the household. Of the respondents 8 were men and 7 women. The household size ranged between 3 and 13 persons (mean: 6.3) and the families belonged to different ethnic groups/castes. The most common one was Dalit (5), followed by Manangi (4), Tibetan (3), Gurung (2) and Lama (1). The level of education was measured with years spent in school and literacy. Out of the 15 respondents, 7 never went to school and were illiterate, 3 had between 1 and 5 years of schooling and 5 went to school more than 5 years. The yearly income of the household ranged between a minimum of 125 US\$ and a maximum of 3,252 US\$ (mean: 1,490 US\$). Only two households were living considerably above the international poverty line of 1.25 US\$⁴⁶ per day. In total, 4 households were statistically above the poverty line with 1.27 US\$ per capita per day and the remaining 9 clearly fell under the threshold.

Only 3 respondents owned the land they were farming on, the rest rented it from Manangi families who gave up farming⁴⁷. All the households which possessed land also owned the house they were living in but 5 households owned neither housing nor land. Considering these numbers, all households except for two can be classified as poor.

5.4.3.2 Livelihood strategies, sources of income

The main occupations of the respondents were: farmer (11), blacksmith (1), plumber (1), teacher (1) and mule driver (1). Beside the main occupation, all respondents had two or three different sources of income to sustain their livelihood. The most common

⁴⁶ ADB, 2017

⁴⁷ The most common renting agreement in Manang is sharecropping. In this system the landowner allows a tenant to use the land in return for a share of the crops produced on his land.

livelihood strategy, pursued by all 15 respondents, was farming (agriculture and livestock herding), followed by the collection of *Yarsa Gumba* in which 11 respondents participated (see Box 3). For some households, the collection of *Yarsa Gumba* was the main source of cash revenue. The income generated from *Yarsa Gumba* ranged between \approx 930 US\$ and \approx 2,000 US\$.

Box 3 Yarsa Gumba

The caterpillar fungus (*Ophiocordyceps sinensis*) called Yarsa Gumba in Nepali, is a fungus that parasites the caterpillar of ghost moths and produces a fruiting body, which is highly valued as medicine in traditional Chinese and Tibetan medicine. It can be found between 3500 and 5000 m in the high alpine meadows of the Himalayas and the Tibetan plateau (Winkler, 2009). Because of the believed aphrodisiac and tonic effects and the resulting high market prizes it is regarded as a status symbol in China. The prices are fluctuating according to the demand and the prices on the international market, but in the last years between 14,000 and 23,000 US\$/kg were paid for the collectors in Manang (interview with ACAP 7). In Manang, Yarsa Gumba has been the most valuable commodity and an important source of income for centuries. Today, it is still a decisive livelihood activity for large parts of the population. The meadows where it can be found are split up among the villages and the harvest is bought by a Chinese wholesaler (interview with ACAP 7). The exploding prices have led to overexploitation and increasing competition in recent years. In 2011, an incident in Manang District where 7 collectors from neighbouring Gorkha district were murdered by a mob of villagers attracted international attention (BBC, 2011).

Out of the 15 respondents, two were directly earning money from tourism. One respondent had a regular income from selling handicrafts, the other one occasionally worked as a porter, but his main occupation was farming. These cases were included because of the small scale of these businesses and the predominance of other

means of livelihood. Yak herding appeared to be the most profitable source of regular income.

5.4.3.3 Impacts of the road

All 15 respondents stated that the road had a positive or very positive effect on the prices for goods like rice, sugar, tea, and spices. It was generally agreed that this is the biggest advancement (quote NT 5: “the road is good for the poor people because of cheaper food”). Furthermore, the improved transportation to the hospital is regarded as an achievement, but at the same time it was remarked by several interviewees that the government has not worked on improving health and education facilities on site. Besides that, the improved access to the market (Besisahar) was evaluated by most respondents (13 positive⁴⁸ answers) as a positive effect of the road. At the same time only one stated that he/she sells products there, and it was this respondent who said that there was “no effect” on the access to the market. The rest of the interviewees was just buying goods there.

The biggest conformity was on the detrimental effects the road has on the environment. Both the occurrence of landslides (11 negative answers) and the effects on air and water quality (9 negative answers) were perceived to be negatively affected by the road. Furthermore, it was agreed upon the negative impacts on land prices (10 negative answers). The rising land prices due to road construction further aggravate the inequality according to several respondents (quote NT 8: “if you possess land, the increasing prizes are good. We have no land, so we have no benefit from that”). Another point of critique that was mentioned by several interviewees were the frequent accidents on the road.

⁴⁸ For the analysis the answers „very positive“, and „positive“ were classified as “positive answers” and the answers “very negative”, and “negative” were classified as “negative answers”. (unless specified otherwise)

Most of the interviewees had a rather positive attitude towards the road. Their livelihood strategies (farming, selling of *Yarsa Gumba*) were reportedly hardly affected by the road. One household was an exceptional case in this respect because the road had a direct and profound impact on its livelihood. In this specific case, the respondent used to run a transportation business with more than 20 mules. He moved to Manang from Gorkha to pursue this business, a fact that further complicates his present situation. Because he is not from Manang, he cannot buy land or a house. Furthermore, he is not allowed to collect firewood in the village vicinity. Today, he is a subsistence farmer, collects *Yarsa Gumba* and takes occasional transportation orders with the mules he was able to keep. He was the only respondent who firmly expressed a negative attitude towards the road (quote NT 12: "The road has destroyed my business. Before I made enough money for my family. I received no compensation for the loss of my business.").

For many factors, no effect of the road was perceived, for example access to education (13 "no effect" answers), use of fertilizer (14 "no effect" answers), access to drinking water (15 "no effect" answers) and electricity (14 "no effect" answers).

5.4.3.4 Validity of the results

The trustworthiness of the results yielded in fieldwork must be considered, especially when working with subjective perspectives, be it the own perception from observation or insights gained from interviews. Validity in this respect means the accuracy and credibility of the results (Creswell, 2003). To enhance the validity, triangulation was used in my case. That means that multiple data sources are used to confirm and corroborate findings and to finally answer the research questions. In my case, I tried not to build my conclusions upon single subjective ratings, but to gather several opinions on the same topic to have a holistic picture of the phenomenon.

6. Discussion of the results

The impacts of rural road construction are complex and often different from what was expected before. In the case of this study, very little knowledge was available beforehand and I had to advance toward the topic from general questions to the specific. The theoretical frame of the study was the broader development discourse in which rural road construction is embedded. In the project plans, high expectations were placed on poverty alleviating and economy strengthening effects. The purpose of this qualitative study was to understand the motivations behind the road construction, to investigate to which extent the assumed effects accrued and to identify how costs and benefits are distributed within the affected population. The research design as well as the research questions are thematically and geographically divided in two parts. The first part aims to answer more general questions concerning the planning and construction of the road and the impacts on the wider region. The second part is a case study of one village in the region, where the impacts of the road on the lives of different social groups are analysed in detail. In the conclusion, the findings from all research questions are synthesised to draw conclusions and to place the study within the context of the theoretical background.

6.1 Research questions

The first question that was raised in *Chapter 1* was:

1. What are the political and institutional backgrounds of the Nyishang road?

Based on the interviews, road construction was demanded and supported by large parts of the population because they were not able to benefit from the booming tourism in the region. Road construction was then politically enforced by a powerful local elite. The interconnectivity between the involved local politicians and businessmen was apparent, and is in my opinion, conveying the impression that a certain degree of clientilism or nepotism played a role in the decision-making process. The role of such factors has been reported from various other projects in Nepal (Bista, 2008; Shrestha, 1997). The desire of the local population to improve

the living conditions in the valley was used as a welcomed justification to pursue the business interest of a small group of entrepreneurs. Another interest that may have played a role, is the hydropower potential in the region, that is yet to be fully exploited. During the study, there were no signs that the construction of the planned Upper Marsyangdi hydroelectric project had already started (Nepal Energy Forum, 2016). In June 2018, during the official visit of the Nepalese Prime Minister KP Oli to China, an agreement was signed between Nepal and several private companies and state-owned enterprises from China to start the construction of the project. Furthermore, the leaders of the two countries affirmed their willingness to cooperate in the development of infrastructure and the hydroelectricity sector (Upadhyay, 2018). This corresponds with the strategical dimension of road construction which has been addressed in the theory (Demenge, 2012; Kreutzmann, 1991).

For the local politicians, the road construction was a perfect project. It was in line with the national policy goals (increase road length, SDG's, connect remote regions etc.), the necessary funding was ensured by international donors, the project had the support of wide parts of the population, and ultimately, the road was conducive to their business aspirations. The dominant role of local elites can be found in examples from other rural road construction projects

The planning process itself was very fast and excluded many important stakeholders, inter alia the authority that is in charge of the protected area in which Nyishang is situated (ACAP) and other tourism related NGOs and associations. These stakeholders were not trying to prevent the road construction, instead they were advocating a planning and implementation procedure that leaves the trekking tourism infrastructure in the region untouched and protects the natural environment. On the one hand, the weak position of ACAP in the field of involved actors can be attributed to a loss of significance and political advocacy since ACAP is not operating under the patronage of the king anymore. The political instability in Nepal may have played a role in this context as well, because responsibilities and political mandates changed permanently in the years after the Civil War. On the other hand, the exclusion of ACAP exemplifies that the power relations in the region are strongly biased towards

the local elite. An example may illustrate this: Since waste management is a problem in the region, ACAP has been working on the installation of safe drinking water stations in the region since 1996 to reduce the use of plastic bottles by tourists. One young entrepreneur from Nyishang used the improved transportation situation to import a water treatment system and is now selling purified water in plastic bottles to hotels and tourists. In the interview, he stated that trekking tourists mainly use the safe drinking water stations, but that there is a growing demand for bottled water in recent years. This may be a sign for a decreasing environmental awareness in the changing tourism sector compared to times when trekking tourism was prevailing. The direct exploitation of arising business opportunities are a reason for the entrepreneurial success of the Manangi community (see footnote 32), but in this case, the business-oriented thinking is clearly counteracting the conservation goals of ACAP. The example again reveals the poor consideration of different interests and the lack of coordination.

The same reasons can be hold accountable for many of the negative effects that accrued in the region. The findings from the interviews with ACAP officials and representatives of tourism related associations support the assumption that proper planning would have minimized many negative consequences, such as the destruction of trekking trails that have to be managed and mitigated today. The construction work was performed by the Nepalese army with the support of additional workforce. The fact that local businessmen themselves took part in the construction work to accelerate the process also underlines the lack of coordination and the importance that the road connection has for their business. The findings from the interviews suggest that the standards promised in the project proposal (environmentally friendly construction measures, labour-based approach, proper cutting and filling techniques, conduction of EIA) were largely ignored during the construction works. The role of the international donors apparently was restricted to providing the funding for the project. They took no interest in the monitoring the construction process or the compliance with the official project plan.

The analysis of the backgrounds leads us the second question that the study aimed to answer:

2. Which impacts of road construction can be observed in the whole region?

As mentioned above, there were mainly two groups in the population with contrasting interests, namely the people benefitting from tourism and the people who don't. The impacts in the whole region vary between these two groups. According to this division, the impacts that have been observed and investigated can be organized in three categories: impacts that apply to all inhabitants of the region, impacts on the tourism actors and impacts on the non-tourism actors.

An important impact, mentioned by people across the region was the increased mobility and improved transportation situation. Road connection has drastically reduced travel times, eased the transportation of patients to the hospital and decreased the prices for consumer goods and building material. Advancements in this field are found commonly in literature (Jacoby, 2000) But as the case of the apple farm in Brathang shows, the economically strong are more likely to grasp these opportunities and use the improved transportation facilities. There is high potential for an increase in agricultural production in the region and ACAP is trying to make these opportunities available to larger parts of the rural population. This can be regarded as a step in the right direction because as shown in *Chapter 2.3.3.2*, the scientific evidence clearly shows that road connection alone is not sufficient for growth of agricultural production (Blaikie et al., 1977; Blaikie et al., 2002).

Some impacts that apply to all inhabitants of Nyishang are closely related to the planning and construction process described above. The poor design and inappropriate implementation resulted in bad road conditions and an increased risk of landslides. Also, dust and noise pollution are an important factor, especially because it had severe impacts on the trekking tourism industry in the lower parts of Marsyangdi valley. The tourists' disapproval of walking on the dusty road has led to a

decrease of trekking tourists in almost all villages. Referring to the whole region, the tourist arrivals are increasing, but the length of stay decreases. This leads to a concentration of overnight stays in some places like Manang and less tourist traffic and a loss of business in the villages in between. The study strongly supports the assumption that a new form of tourism is emerging in the region. As for today, the biggest losers are the hotel owners between Besisahar and Chame because their villages are often left out, Bahundada being an especially drastic example. This does not necessarily mean that trekking tourism has no future in the region. The road has adversely affected trekking tourism mainly because the existing network of trails was destroyed by it, but as soon as it is possible to trek on alternative trails without having to walk on the road, trekking tourism could be revitalized. Based on the observations, there is much to be said for it. Traffic volumes are low due to the bad quality, the scenic beauty of the valley remained intact and the trekking tourism infrastructure with lodges in every village is still excellent. At the time of the study, trekking tourism in the villages along the ACT was heavily impaired due to the road construction, but if the NATT are established, the road may even lead to improvements for trekkers as it raises the standards of accommodations and increases the safety by enabling better evacuation (if the probability of accidents decreases). In brief, the trekking tourism was hit hard in the lower parts. On the non-tourism actors, too little data was gathered to make reliable statements beyond what has been described above. The upcoming section will take a closer look at the impacts that the road has on this group as well.

3. What are the impacts on different social groups? Which reactions and adaptations can be observed in the tourism sector?

As for the whole region, the same major social groups can be identified in Manang. In the previous section, the effects on tourism in the whole region have been discussed. As shown above, the case study of Manang is exceptional in this regard. Some trends are corresponding with the findings from the whole region, such as the increase in tourist arrivals, but trends like the growing domestic markets appear to be much more important in Manang (again with the exception of the apple farm in

Brathang, where domestic tourists are also an envisaged target group). While the length of stay in the whole region decreases, it is prolonged in Manang. The findings from the interviews and the observed changes in Manang support the claim that a new form of tourism, different from the trekking tourism on the ACT, is developing in Manang. In this new form, the visitors come with a jeep, stay several days in a hotel in Manang where they use the improved choice of touristic activities, and leave the area with a jeep again. The adaptations of the tourism actors to this trend were described in the previous chapter. For the tourism sector in Manang, a coexistence of the trekking tourism and the new form of tourism would be the most profitable. Today, the road clearly helps the new form, while hampering trekking tourism especially in the lower parts. If measures are taken to revitalize trekking tourism, both can coexist. This is seen by many hotel owners as the best-case scenario. Hitherto it looks like with more alternative trails, the negative effects may be buffered.

But what does this mean for the social group of tourism actors? With road connection, the speed and volume of innovations has increased. One hotel owner stated that attached bathrooms are going to be the standard in a few years (interview with HO 16). This enhanced pressure may force many smaller hotels to give up their business, a trend that is already observable. Ultimately, the tourism business in Manang could be concentrated on a small group of successful players. Still, aside from the hotel owners that cannot hold up to the developments, all hotel owners in Manang are positively affected by the road. Alike the other people in the region, the livelihood of the hotel owner depends on environmental assets and the observed developments in the tourism sector raise some sustainability concerns. Due to the growing number of tourists, the water consumption is likely to increase. In Manang, where water is already scarce, this may lead to water scarcity during the peak seasons and conflicting interests between agriculture and tourism. Regarding waste management, the effects of the road are difficult to predict. On the one hand, more garbage could be produced due to growing numbers and the changing consumption patterns of the visitors, on the other hand the road could make garbage removal easier due to better transportation. The example of the “water factory” outlined above, emphasizes the business-oriented mindset and the lack of environmental

awareness among the hoteliers. It is also an example (like the vegetable production with greenhouses) of livelihood diversification facilitated by the road. In summary, it can be stated that the livelihoods of the tourism actors in Manang are enhanced through the road. The next question is if and how the rest of the population can participate in this development.

One important factor in this context is the low level of community participation in tourism. The results from the hotel survey show that almost all employees come from outside Manang and that hardly any Manangis are hired in the hotels. This may be due to the aforementioned inequality within the community. While the wealthy Manangis send their children to private schools outside the valley, the poorer families either cannot effort to send their children to school or have to rely on the educational institutions in Manang. As a result, they remain unqualified for the jobs in the hotels. Thus, the upward trend in tourism does not result in increased employment opportunities for the locals. The upcoming section will discuss the results concerning the non-tourism actors in detail.

4. What are the impacts of road construction on non-tourism actors, and are they in line with the assumed positive effects stated in the project plans?

Based on the findings, the effects on the group of non-tourism actors are less profound compared to the group of tourism actors. Nevertheless, the “ordinary people” of Manang appreciate the improvements in transportation, mobility, and the decreased prices for consumer goods. Except the specific case of the mule driver, the majority of non-tourism-actors see more advantages than disadvantages through the road.

According to ADB (2007), the official goals of the project are:

- Enhancing poverty reduction and inclusive development.
- Enhanced equity, employment and income opportunities for the poor and disadvantaged.

The socioeconomic characteristics of the interviewed households show, that they fall under the category of poor (only 2 of 15 households lived considerably above the poverty line) and/ or disadvantaged (only 4 households belonged to the dominant ethnic group of Manangis).

Based on the findings, the impacts of the road regarding poverty reduction were minimal. There was no positive effect on income generation or employment opportunities, merely the household expenses for consumer goods have dropped. As shown in the theory, this is a well-known phenomenon from other case studies (Bryceson et al., 2008). The number of locals working in road construction was very low, which stands in contrast to what was promised in the plans. Furthermore, the local involvement in the other construction activities Manang was very low. The same applies to the tourism sector, where the growing demand for labour did not result in improved employment opportunities for the non-tourism actors of Manang.

The results show that the non-tourism actors rely on a portfolio of different livelihood strategies. Predominantly, these are agriculture, livestock herding, occasional jobs and the collection of Yarsa Gumba. So far, these livelihood strategies are barely influenced by the road, neither in a positive nor in a negative way. Since almost all respondents were involved in agriculture in some way, the growing demand for agricultural products by the tourism sector can be seen as a future opportunity for the farmers. In that manner, they could indirectly profit from the road by selling their produce to the hotels. To create a catalytic effect on agricultural production, the sole construction of the road seems to be insufficient (Pernia, 2003).

Concerning enhanced equity, the findings suggest a contradictory effect. The economically strong have benefitted the most from the road, a fact that is perceived by most of the respondents. Apart from the positive impact that the road had on their major source of livelihood (tourism), it is also their land of which the value rose through the road. Many of the poor and disadvantaged people neither have land possessions nor are their livelihood strategies ameliorated. The result is a further intensification of inequality, a phenomenon that has been observed in many other case studies (Cook, 2005; Hettige, 2006; Howe & Richards, 1984; Wilson, 2004). Another goal mentioned in the project plans of the GoN was:

- Women and indigenous people in particular may be benefited more from improved access to the market centres and various service providing agencies like health centres, banks, training institutes, women development office etc.

The access to the market was improved indeed, but only one of the respondents actually made use of the possibility to sell products at the market in Besisahar. The findings show that the improved access is mainly benefitting the larger-scale enterprises (apple farm, hotels). The health centre did not receive any improvements according to the staff, and no banks, training institutes or women development offices have been established so far. The fact that women and “indigenous people” are highlighted in this document by the GoN is, in my personal view, a sign for the intention to please the donors.

- Accelerated poverty reduction and inclusive development, thereby enhancing the effectiveness and efficiency of the delivery of public services, and improving access of rural people to economic opportunities and social services.

Regarding the delivery of public services, no improvements have been reported by the respondents. Neither the educational institutions nor the health post has received any benefits from the road apart from indirect improvements through enhanced

mobility. This is in line with the findings from other studies that roads are not enough. Improvements in public services and access to economic opportunities are no natural consequence from road construction (Kafle, 2007). Without supplementing measures like investment in health and education facilities, the poverty alleviating effect of roads remains minimal (Campbell, 2010). This is not to say that the road cannot be an important component of poverty alleviation and livelihood development, but it needs complementary actions that enable the poor to capitalise on the improved circumstances. In that respect, the case study corresponds to the results from other studies (Escobal & Ponce, 2002; Hettige, 2006). The main opportunities facilitated by the road are easier access and better transportation, and the findings show that these opportunities are more likely to be grasped by the economically strong than by the poor. This has been proven by several other case studies from Nepal as described in *Chapter 2* (inter alia: Blaikie et al., 1976; Blaikie et al., 2002; Lama & Job, 2014).

The fact that the non-tourism actors are pleased by the road although they are not reaping direct monetary benefits can be explained by non-economic impacts of the road. The road has a strong symbolic value for rural populations and that emphasizes how closely roads are affiliated with the concept of development (Demenge, 2013). For the local population, the road connection reduces the feeling of remoteness and backwardness and brings them closer to the outside world. Physically, the road reduced the travel time to Pokhara from 5-6 days (4-5 days of walking + one day of bus ride) to only two days (one day jeep + one day bus ride), but at the same time the “perceived distance” is shortened. Even if this journey is not undertaken at all or only once a year, the city feels considerably closer, especially for elder people who are able to avoid the strenuous hike down and up the valley. In that regard, the road has a positive impact on the living conditions of the rural population in Nyishang and Manang because it reduces the perceived remoteness and backwardness through enhanced mobility, a factor that has been highlighted by several other studies (Demenge, 2012; Demenge, 2013). Unfortunately, remoteness and backwardness are connotated positively by trekking tourists who enjoy walking through untouched and traditional valleys. In my opinion, it has to be understood and respected that the

people living in such areas find these attributes way less fascinating and enjoyable. Road connection itself is a sign of development and progress in this context and the fact that the people wanted the road, and finally got it further contributes to their satisfaction.

6.2 Limitations of the study

There are several limitations to the study that have to be taken into consideration when interpreting the results. For example, the data provided by ACAP was limited. More detailed data (e.g. concerning the length of stay) would have improved the internal validity of the study. Furthermore, the focus of the study was generally developing and changing while the research was conducted. The low degree of planning in the run-up to the field trip led to time-consuming organisational tasks such as the acquisition of a research permit for ACA. Moreover, this affected the application and implementation of methods. In Manang, the questionnaire was designed and translated under pressure in a short amount of time, what surely effected the operationalisation and overall quality. Then the organisation of a translator on site was more complicated than expected. Another limitation of the study was the relatively small sample size of the household survey in Manang. This in combination with the non-randomized sampling make the results difficult to generalize. In summary, a more concrete planning in advance may have increased the accuracy of the findings.

6.3 Recommendations for future research

Based on the results of the study and the limitations, there are several recommendations for future research in the area. First, some of the outlined limitations may be eliminated through more precise planning. Generally, future research should provide precise data concerning the impacts of the road on different spheres. In order to enhance the accuracy of the results, more data may be obtained from ACAP and more respondents may be included from different villages in the regions. Especially the comparison of the road impacts on different villages along the

road appears to be interesting. Concerning the development in Manang, there are various possible research topics. The changes in the visitor structure, the adoptions of the hotel sector, the evolvement of new forms of tourism, the role of migration and the resulting changes for the region are promising fields of research. In addition to the tourism related research, future studies could focus on possible measures to enhance the positive effects of the road for the livelihood strategies of the local poor (particularly agriculture).

7. Conclusion

As presented in detail in the theory section, it is difficult to make unambiguous statements about the impacts of road construction. This thesis contributes to the discourse of rural road construction and development by adding another case study. Some findings of the study share some typical characteristics with the bulk of the scientific work on this topic some are different due to the specific local preconditions. The case of road construction in Manang is an example for the manifestation of global trends (e.g. infrastructure construction for development) on the local scale. It is this interconnectivity of involved interests, trends, and actors that make rural road construction both interesting and difficult to comprehend. Thereby, this particular region represents an exceptional case, because the unique local history and the existence of a successful trekking tourism sector prior to road construction distinguishes the region from other remote areas in Nepal.

Based on the results of this study, four major conclusions can be made.

The first conclusion is that the way the road was planned and constructed illustrates many of the problems that Nepal as a country faces in general. The political instability with changing responsibilities and the top-down approach in decision-making have led to poor project planning and implementation. The failed harmonization of different interests and the interweavement of political motivation with the business interests of a powerful local elite resulted in ad-hoc road construction. As a result, the road itself is dangerously aligned and landslide-prone, and trekking tourism was seriously hampered. In that sense the construction of the Chame-Khangsar road is a prime example for the deficient planning and implementation of development projects that has been criticised by various Nepalese authors (Bista, 2008; Shrestha, 1997).

The second conclusion that can be made, is that so far, the trekking tourism businesses in the lower parts of the ACT are the biggest losers of road construction. The tourist arrivals for the whole region are increasing with the trend of a decreasing

length of stay. The resulting concentration of tourism to the higher regions led to severe drops in tourist numbers in many villages along the road. Within Nyishang, the differences between the villages are less pronounced. The findings show that Manang is a special case because it has the most favourable position along the ACT and the highest adaptive capacity.

The third conclusion that can be drawn from the findings of the case study is that the road has facilitated the evolvement of a new form of tourism in Manang. Manang is thereby reached with jeeps and used as a base for day trips. The visitor structure is different from classic trekking tourism with more domestic and Asian tourists. This entails new demands and requirements. The results of this study indicate that the Manangis are adapting to these changes by a diversification of touristic activities and investment in the quality of accommodation. The ability of the Manangis to adapt to and actively encourage this new form of tourism can be explained with the community's history and tradition of entrepreneurship. Beside the accruing economic benefits, this development can be expected to have detrimental environmental consequences.

The fourth conclusion is that without complementary measures, the benefits of road construction for the local poor are mainly limited to enhanced mobility and lower prices for consumer goods. Their dominant livelihood strategies are farming and the selling of Yarsa Gumba and both remain widely untouched by road effects. The greater implication of this finding is that for effective poverty alleviation, roads are not enough. The universal endorsement of roads as a panacea for all economic and social ills of rural communities is not supported by the study.

7.1 Implications for practice

To buffer the negative effects of the road and to revitalize trekking tourism as a core touristic product of the region, the establishment of alternative trails avoiding the road seems promising. The NTB and ACAP should work hand in hand with the local communities to ensure that the NATT offer a similarly good or even better trekking experience as the old trails. The example of the successful apple farm in Brathang illustrates that the agricultural potential of the region is clearly facilitated through the road. Funding programmes to enhance agricultural productivity should be launched to ensure that the local subsistence farmers can profit from these improvements. Especially apples and the production of dairy products appear to bear potential. With regard to the developments in the tourism sector in Manang, the negative environmental consequences should be monitored and minimized. The hotel owners should care for the intactness of the natural environment in their own best interest, because their livelihoods depend on it. One problem that led to the demand for road construction in the region, was that trekking tourism failed to benefit the population as a whole. Therefore it will be a challenge for the future to ensure that more people can partake in the growing tourism sector.

8. Bibliography

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Annex

Annex I: Hotel survey interview guideline

1. What is the name of the hotel?
2. What is the name of the owner?
3. How many beds does the hotel have? (Capacity)
4. How many rooms with attached bathroom does the hotel have?
5. How many storeys does the hotel have?
6. When was the hotel established?
7. How many times and when was it modernized?
8. What was the investment volume of the last modernization?
9. What is the price for a double room in the peak season?
10. Which facilities/ services are offered?
11. How many employees are working in the hotel during peak season (family members are not counting)?
12. What is the district of origin of the employees?
13. What is your attitude towards the road? Please choose from: very positive,

Annex II: Household questionnaire

Questionnaire

Date and time: _____

Respondent Number: _____

My Name is Clemens Rossmanith, I am a Master's student from the University of Innsbruck, Austria and I conduct a research on the impacts of road construction in Manang. The Questionnaire is anonymous. Thank you for answering the following questions.

Age: _____ Sex: male female Ethnicity/Caste: _____

Number of years of education: _____

How many children do you have?: _____

How many family members live within your household? _____

District of Origin: _____ Current place of living: _____

How many Months per year do you live in Manang? _____

Main Occupation: _____

Monthly Income: _____ Do you receive remittance? Monthly amount: _____

Other sources of income: _____

Size of cultivated land: _____

Landownership: rented owned

Ownership of housing: rented owned

How much livestock do you own?: _____

In which groups/ committees do you participate: _____

What effects do you perceive through road construction?

Effect on:

Income generation: very positive positive no effect
negative very negative

Land prize: very positive positive no effect
negative very negative

Access to credits: very positive positive no effect
negative very negative

Access to drinking water: very positive positive no effect
negative very negative

Access to electricity: very positive positive no effect
negative very negative

Access to market (Besisahaar): very positive positive no effect
negative very negative

Use of fertilizer:
negative very negative very positive positive no effect

Prizes for goods like rice, sugar:
negative very negative very positive positive no effect

Water and air quality:
negative very negative very positive positive no effect

Occurrence of landslides:
negative very negative very positive positive no effect

Forests and pastures:
negative very negative very positive positive no effect

Access to health facilities:
negative very negative very positive positive no effect

Access to job opportunities:
negative very negative very positive positive no effect

Access to education:
negative very negative very positive positive no effect

Safety in the village:
negative very negative very positive positive no effect

Eidesstattliche Erklärung

Ich erkläre hiermit an Eides statt durch meine eigenhändige Unterschrift, dass ich die vorliegende Arbeit selbständig verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel verwendet habe. Alle Stellen, die wörtlich oder inhaltlich den angegebenen Quellen entnommen wurden, sind als solche kenntlich gemacht.

Die vorliegende Arbeit wurde bisher in gleicher oder ähnlicher Form noch nicht als Magister-/Master-/Diplomarbeit/Dissertation eingereicht.

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