

Chapter 1

INTRODUCTION

The term landscape, 'landschaft' in German or 'lantschap' in Dutch, is used to refer to a section of land which the eye can view. It also has two cultural variants, as the representation of natural scenery in painting and as improving the appearance in gardening. Essentially, landscape is inclusive of the natural backdrop as well as cultural imprints on it. Various factors contribute to the change in landscape. In pristine areas, modification occurs over time due to natural processes. In places of human impact, variations can bear a regional stamp. Take the contrast of city-scape in two intermont valleys as determined by local materials: Kathmandu Valley, with an abundance of lacustrine soil, has brick buildings while Pokhara Valley, filled with outwash boulders, has stone structures. The ochre tone of the former and gray-white facade of the latter place give a distinct character to their landscape.

In the Himalaya, there is a tendency to highlight the physical grandeur and ignore human endeavour. Yet, the flights of field terraces carved out of steep hill slopes are the toil of generations. Some environmentalists even consider these as profane human intrusion. One early botanist to visit Nepal observed that:

“all along the Himalaya cultivation is most intense in it (sub-tropical belt), and more distinctly cuts off the upper forests from the lower forests than any other feature” (Burkill 1910).

He was obviously referring to the *Schima wallichii*-*Castanopsis indica* forest zone. In rural areas, agricultural land use is an essential feature of the landscape. Human use of adverse topography is exemplified by:

“The terraced fields of Nepal, which stretch several hundred meters upward from the bottom of the valley up to heights of 1,500m and give the landscape its typical character....” (Haffner 1992).

Landscape appreciation, therefore, needs to encompass the totality of the physical setting and human endeavour thereupon.

The purpose of this study is to enquire into the landscape change in a hill area of central Nepal. The aspects covered are landform, land use, and cultural features based on temporal data extending over four decades. This chapter introduces the study area, methodology used, and data sources. The second chapter deals with the physical

geography of the area based on aerial photographs. The third chapter on land use is also derived from aerial photographs. The fourth chapter presents visual evidence with use of terrestrial photographs at two time intervals. The fifth chapter is a recapitulation of study findings along with reference to some other case studies. The concluding chapter attempts to arrive at some explanation of the dynamics of landscape change.

1. The Study Area

The area for this study includes the immediate environs of the confluence of Marsyangdi river and Ngadi* Khola in Lamjung district (Figures 1 and 2). The choice of area was purposive due to this researcher’s familiarity with the place as a native. Familiarity, of course, does not necessarily mean objectivity. The same locality perceived as a dense woodland in childhood may appear less so when one is an adult. Therefore, it is difficult to ascertain whether the writer’s observation on forest depletion quoted below was based on reality or influenced by the prevalent notion at the time of writing (Gurung 1966).

“Forest areas I knew as a boy two decades ago were now mere shrubland due to overgrazing or had been converted into cropland. And inspite of the extension of cropland at the cost of forest, there were recurrent periods of food shortage. The main reason contributing to this situation seemed to be the increase in population and consequent environmental stress.”

The writer also reminisced about his village that:

“Taranche was strung between two dangers; landslide above and flooding of the fields on the banks of the Marsyangdi, during heavy rains (Gurung op. cit).”

Table 1: Elevation Zones, Lamjung

Zone	Area (km ²)	Per cent
1. Above 6,000	24.2	1.4
2. 4,500 – 6,600	90.7	5.4
3. 3,500 – 4,500	210.0	12.4
4. 2,500 – 3,500	287.3	17.0
5. 1,500 – 2,500	417.0	24.7
6. 1,000 – 1,500	348.0	20.6
7. 500 – 1,000	292.8	17.3
8. Below 500	20.9	1.2
ALL	1,691	100.0

Source: MENRIS 1998

In a way, this enquiry incorporates some re-evaluation of one’s own perceptions against the ground reality.

The above, subjective consideration on the choice of study area also turned out to be a fortuitous one from the view of relief contrast of the district where the study area is located. Of Nepal’s 75 districts, Lamjung along with adjoining Kaski, Gorkha, and Sankhuwasabha in the east have the maximum elevation range. Of the total 1,691 sq.km area of Lamjung district, 45.3% of the land surface lies between 1,000 and 2,500m (Table 1). The

* See Glossary

Figure 1: Lamjung district

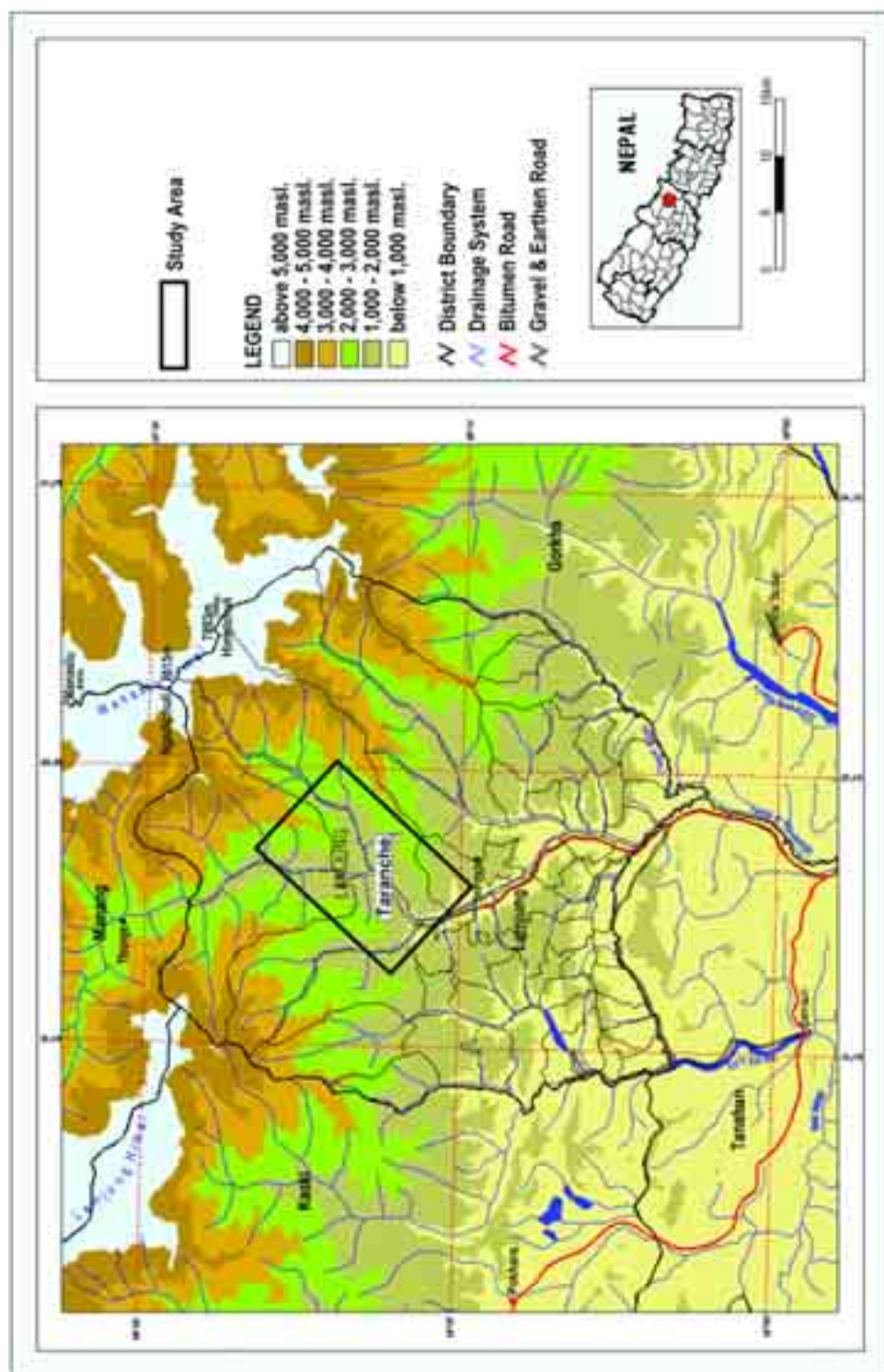
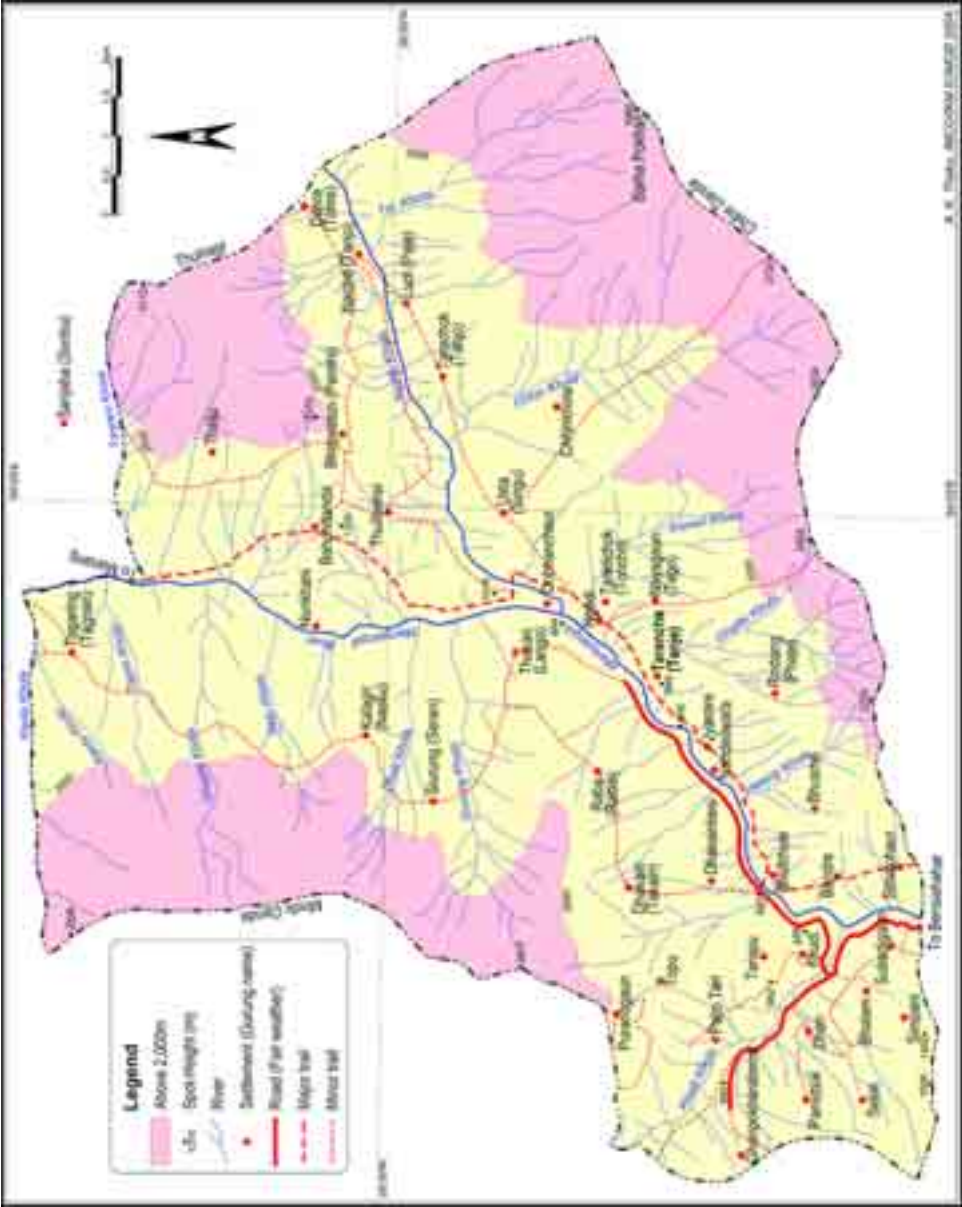


Figure 2: Marsyangdi - Ngadi confluence



higher elevation area from 2,500 to 6,000m is 34.8% and the lower area from 500 to 1,000m is 17.3%. At the extremity are 20.9 sq.km below 500m and 24.2 sq.km above 6,000m.

The study area is dominated by Himalchuli (7,893m) that lies only 25km north of Taranche (945m), focus village of the study (Figures 1 and 3). This means an extreme gradient with a loss of 278 metres to a kilometre. However, most field observations are confined to elevation ranges from 781 to 1,800m (Zones 5,6,7 of Table 1) where human habitation is more pronounced.

2. Methodology and Data

The study approach adopted was basically one of landscape appreciation through geographic method. This involved the use of aerial and terrestrial photographs and field observation (Annex A) combined with interviews on local history. The investigation was carried out at two levels of spatial hierarchy. The first hierarchy is a reconnaissance transect of a wider extent. This covers an area of nearly, 10,000 hectares of land along the 20km length of Marsyangdi Valley from Khudi to Tagaring and another 7km along Ngadi Valley from Dobhanchaur to Naiche (Figure 2). The second hierarchy is a more detailed coverage of 320 hectares of land around Taranche village (Figure 4). This smaller area is bounded by the Marsyangdi to the west, Sisneri Khola to the north, Hwang Khola to the south, and scarp slopes below Nayagaon and Rindang (Figure 2). Most settlements within the study area were visited to ascertain their household size and ethnic composition (Annex A). Landscape change in the above two areal hierarchies was assessed on the basis of various data sources as described below.

- a. Aerial photographs (1958 & 1996): The two sets of aerial photographs are those of the Survey of India (1958) at a scale of 1:40,000 and of the FINNIDA (Finnish International Development Agency) Project (1996) at a scale of 1:25,000 (Figure 3). Both airphoto sets were taken for the purpose of preparing topographic maps. They represent a time interval of 38 years but precise comparison to assess change is hampered by the difference in scale. The information on river terraces, landslides, and land use was based on the interpretation of these airphotos.
- b. Topographic maps (1960 & 2001): Survey of India as well as FINNIDA Project map sheets covering the present study area have similar longitudinal and latitudinal extent: 84°15' to 84°30'E and 28°15' to 28°30' N. The Survey of India map sheet (West No. 3 district, No. 71 D/7) is at a scale of 1:63,360 (one inch). The FINNIDA Project map sheet (Bahundana, No. 2884-10) is at a scale of 1:50,000 (half the scale of the source airphoto). The former has a contour interval of 100 feet and the latter of 40 metres (Figure 5). Both sets of topographic maps indicate major land-use types in colour: forest (green), cultivation (yellow), and settlement and trail (red).
- c. Terrestrial photographs (1962-2002): The third data sources utilised to evaluate landscape change were photographs of the same place taken at an interval of four decades (Chapter 4). Most of these repeat photographs were taken by the

Figure 3: Taranche aerial photographs



Figure 4: River terraces, Taranche

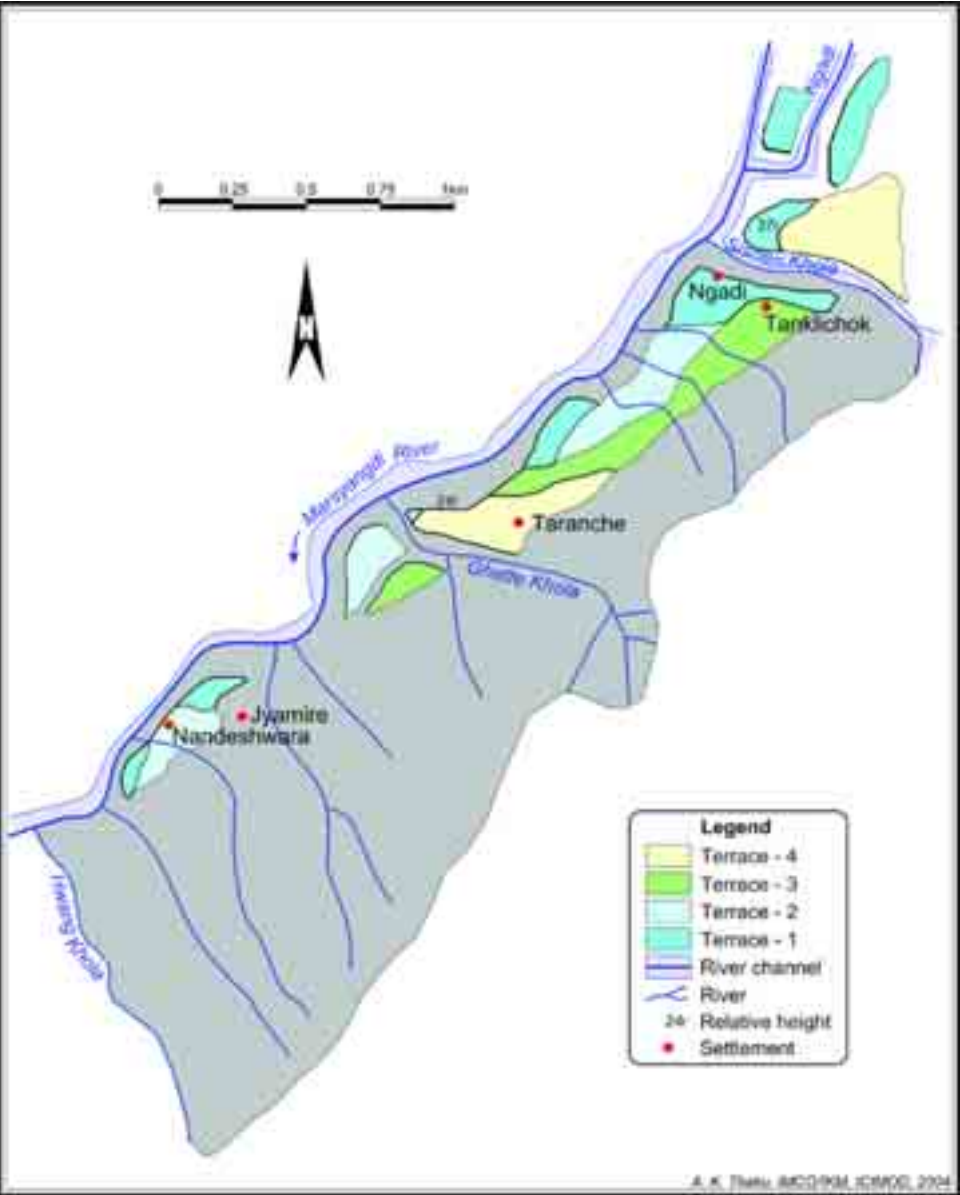
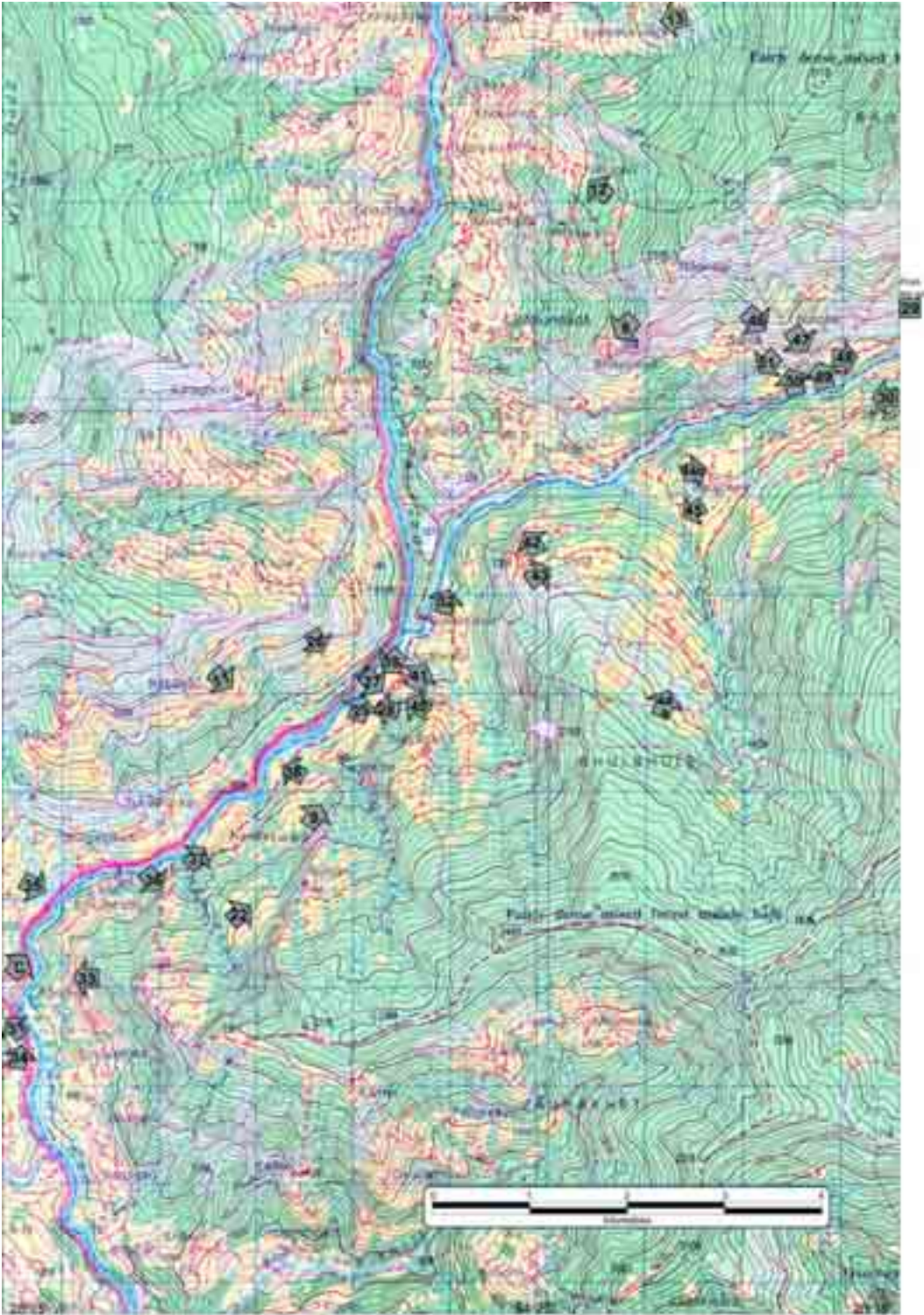


Figure 5: Topographic map with photo index



researcher during two visits to the area from 10-31 October and 18-28 November 1962 and during the winters of 2000, 2001, and 2002. A few are of later date to highlight particular changes. Although the repeat photographs do not match the season, they do provide an objective situation of physical and cultural features at the two time intervals. Supplementary repeat photographs not cited in the text are given at the end of Chapter 6.

- d. Personal observations (1946-2002): The researcher left Taranche in December 1946 for schooling in India. Since 1955, he has made frequent short visits to his village. The latest ones were in the December - January months of 2000, 2001, and 2002 in the course of field work for this study. Such personal observations span over 56 years, but this source may have some propensity for subjectivity.

