

## CONTEMPORARY DIRECTIONS FOR DEVELOPMENT OF VILLAGES AND LODGES IN HIGH MOUNTAINS BASED ON THE HIMALAYAS

Anna PAWEŁCZYK \*

\*MSc Eng. Arch.; Faculty of Architecture, Silesian University of Technology, Akademicka 7, 44-100 Gliwice, Poland

E-mail address: [anna.pawelczyk@yahoo.pl](mailto:anna.pawelczyk@yahoo.pl)

Received: 4.05.2017; Revised: 15.05.2017; Accepted: 8.09.2017

### Abstract

The essence of the studies are present-day mountain shelters, lodges that are open for business and the impact of global tourism on their architecture. While analyzing an aspect of living in time and place context, the types of construction objects found there were determined. The spatial layout of mountain villages was submitted for analysis and the distinguishing characteristics of Himalayan shelters were indicated, based on those located in the Mount Everest area. The paper presents potential directions for development of these types of buildings.

### Streszczenie

Istotą badań są, funkcjonujące w Himalajach Nepalu, współczesne schroniska górskie, lodge oraz oddziaływanie globalnej turystyki na ich architekturę. Analizując aspekt mieszkania w kontekście czasu i miejsca – wyróżniono typy obiektów tam występujących. Badaniom poddano układ przestrzenny górskich wiosek wskazując, na przykładzie usytuowanych w rejonie Mount Everestu, cechy charakterystyczne himalajskich schronisk. Przedstawiono potencjalne kierunki rozwoju tego typu obiektów.

**Keywords:** Lodge; Shelter; Mountains; Development; Globalization; Tourism.

## 1. INTRODUCTION

To understand construction objects of high mountains, it is essential to become acquainted with particular climatic, social and economic conditions in Nepal. The climate does not foster plant cultivation or industrial growth in mountain regions. Temperatures in winter drop to -40 degrees Celsius and southern slopes are affected by monsoons, which bring heavy rainfall in lower parts and snow in higher parts. For most of the year the Himalayas are an unfavorable place to live, ergo to take up residence. Contrary to the above, the income from tourism makes the Nepalese extend tourist infrastructure, especially housing in the areas above 4,000 masl, rather than leave the mountains and locate their houses in more encouraging regions.

Trekkers arrive mainly in two periods: summer and winter. In case of the most popular tourist region, where routes lead to Everest Base Camp, they come in periods from October to half December and from March to May. It affects the locals' mode of life. Many Nepalese arrive at that time to service tourist activities, whereas in the off season they descend to Kathmandu where they spend the remaining part of the year. High-mountain villages in this region thus constitute mainly shelters and hotels prepared for tourists.



Figure 1.  
From the top: Sagarmatha National Park in Nepal; the  
record of the author's trek

## 2. RESEARCH METHODOLOGY

The interpretation research described by Elżbieta Niezabitowska was chosen as a research method [1]. Creating the knowledge occurs through development of alternative interpretations of reality. The researcher owes his knowledge to the intuition combined with reasoning and the research objective is the development of interpretative, theoretical perception. The actions undergone by the author comprise the overview of examined construction objects and documentation, by means of a camera and freehand sketches, later edited in computer programs. The villages located on the trekking route to Everest Base Camp were chosen for the studies.

The spatial layout was described on the basis of observation of Namche Bazaar and Dingboche, while typical shelters in Dhole, Gokyo, Gorak Shep and Dingboche were selected to present story projections. The studies were carried out during the expedition to the above-mentioned region and they are mainly the author's interpretation.

The schematic map at the top of figure 1 shows the location of the Sagarmatha National Park in Nepal. It is the highest-located national park in the world [2]. In 1979 it was listed in the UNESCO World Heritage Site [3].

The figure below the map is the record of the author's trek with the specification of the elaborated locality.

## 3. RESIDING IN THE MOUNTAINS EXEMPLIFIED BY NEPAL

The essence of residing can have many meanings. Invoking Martin Heidegger's philosophy and his analysis of being: "...the term of *being* (...) does not express *what* of this being (...), but being" [4]. Analogously, residing is both the object, that is home within the meaning of a building, though primarily functioning of a human in space, ergo the state of being determined by all performed actions. While analyzing the traditional architecture of high mountains one cannot focus only on the first meaning. The climate severity cause *utilitatis* and *firmitatis* from the Vitruvian Triad to precede *venustatis*. However, it does not imply that in the austerity of the high-mountain architecture one cannot find beauty. Residential buildings are stark, unsophisticated and harmoniously integrated into the landscape. Their beauty does not consist in outer aesthetics, but actually in a peculiar adjustment to the nature of the setting. The



**Figure 2.**  
Lodges on the trekking route – photo by Anna Pawełczyk

beginning of residential housing in the Himalayas is stone lodges covered with roofs also made of stone and earthen floor. Every lodge is surrounded by low stone walls winding over slopes. There are many such construction objects, either inhabited or currently

abandoned, on the routes covered by trekkers.

The issue of contemporary residence in the Himalayan villages is defined by three categories, presented in the diagram below. The presented categories are the author's division, created on the

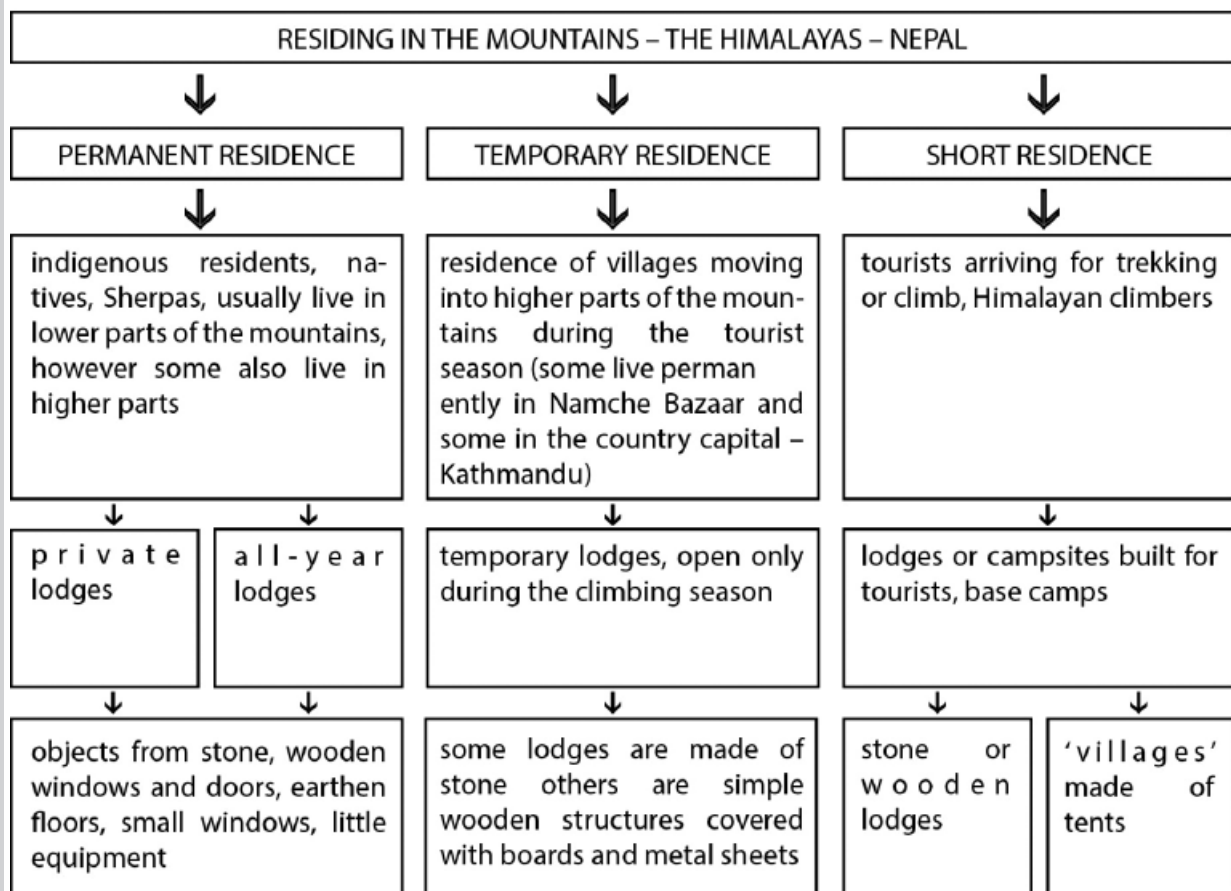


Figure 3.  
Residing in the mountains – acc. to the author's studies

grounds of her own studies.

The first group is the architecture inhabited by people living in the mountains all year round. They are indigenous residents, including Sherpa people, misinterpreted merely as bearers. They live in the construction objects mainly made of stone, with extra functions, and as a consequence, more developed ground floor projection. They make a living mostly from tourism and rearing yaks which carry goods to the villages located in the higher mountain parts, get hired as bearers or run lodges, restaurants and shops on the trekking route. Global tourism resulted in using only one typical English term lodge for a shelter in Nepal, which is recognizable by trekkers from all over the world.

The second group consists of housing inhabited by the Nepalese who live in the mountains only in the trekking season. They differ from the first group due to the fact that out of season the residents stay in houses located in lower parts of the country.

The third group are facilities for trekkers, mountaineers and Himalayan climbers who arrive in the Himalayas, whose residence can be determined as a short one. Trekking usually lasts for 2-3 weeks, the expedition to the mountain over 8,000 m high – two months. Visitors live in lodges, campsites or tent bases. For some, the stay in the Himalayas is only a holiday, for others, mountains are the way of living and the place of residence – an alternative home perceived as an individual, multilevel continuum of compilation home, referring to extra urban space. The place or places interpreted in this way, where their house is functioning, depend on the ability to cross borders, which is the attribute of the sense of freedom [5].



**Figure 4.**

From the left: The way of transporting building materials; Hotel Everest View located at 3880 masl – the object is intended for a short stay – photo by Anna Pawelczyk

#### 4. REASONS FOR DEVELOPMENT OF VILLAGES IN THE HIGH MOUNTAINS

A major reason for the development of villages in the Himalayas is the surge of trekkers into Lukla region, arising from the desire to reach Everest Base Camp and see a few of fourteen mountains over 8,000 m high.

An increase in the demand for accommodation in the Himalayas has continued for about ten years. Previously, high mountains were associated with extremes intended only for Himalayan climbers and people of high incomes. In villages there were few lodges or campsites. There were also few hotels, for instance Hotel Everest View opened in 1971. With an increase in the number of tourists, lodges, bakeries and shops began to develop. To meet commercial needs, village expansion had to provide for more comfortable accommodation. Building a lodge high in the mountains entails carrying a considerable part of raw materials single-handedly, unaided by machines. This created the endeavor to simplify structures. Stone construction objects were replaced with wooden structures filled with chipboards, covered with roofs made of metal sheets or plastic, which are less durable but erected in a shorter time.

Nepal belongs to the group of underdeveloped countries [6]. In 2015 the share of agriculture in GDP amounted to over 30 per cent [7]. Himalayan tourism is the biggest wealth of the country, and a higher accommodation standard means higher earnings. The number of people willing to complete trekking

routes has been growing in the recent years, apart from a temporary decline in the number of tourist after the earthquake in 2015 [8]. Based on the analysis of the foregoing research, it can be claimed that the architecture of Nepalese villages will still develop in the above-mentioned direction.

#### 5. SPATIAL LAYOUT OF VILLAGES IN THE HIMALAYAS EXEMPLIFIED BY NAMCHE BAZAAR AND DINGBOCHE

The author studied two representative types of the spatial layout of Himalayan villages and exemplified them. The research was carried out in two localities of the most spatially expanded housing, on the route completed by the author.

##### Namche Bazaar

The biggest village in the discussed region is Namche Bazaar, located at 3440 masl. It used to be the major trading center in Khumbu region, currently it is a tourist resort. It was built in the amphitheatrical, terraced layout. Namche is situated on the slope, stairs run in various directions, which enables to cover further levels. Along parallel streets, there are stone houses and hotels on further terraces. Most of them provide rooms for trekkers. The buildings are simple, made of stone, kept in a homogeneous style. They mainly differ in signboards and display windows in ground floors at main streets.

## Dingboche

The linear configuration of housing, exemplified by Dingboche located at 4410 masl, is distinct and far more frequent. This spatial layout results from the residents' need of even access to the river and the width of the valley. The road from Tengboche to Kong Ma La gap runs through the middle of the town. Houses, lodges, shops and restaurants are located along the path. The next belt consists of private buildings and pastures for yaks are surrounded

by low stone walls.

Due to its location and intensified tourist traffic, Dingboche was much expanded over the recent years. The next trekking spots on the route to Everest Base Camp are at high altitude and completing the route quickly causes altitude sickness. To reduce the risk, tourists are advised to acclimatize for at least two days around Dingboche before the further trek.

The photos below present the discussed villages in the autumn, at the turn of October and November.



Figure 5.  
From the left: Dingboche; Namche Bazaar – photo by Anna Pawelczyk

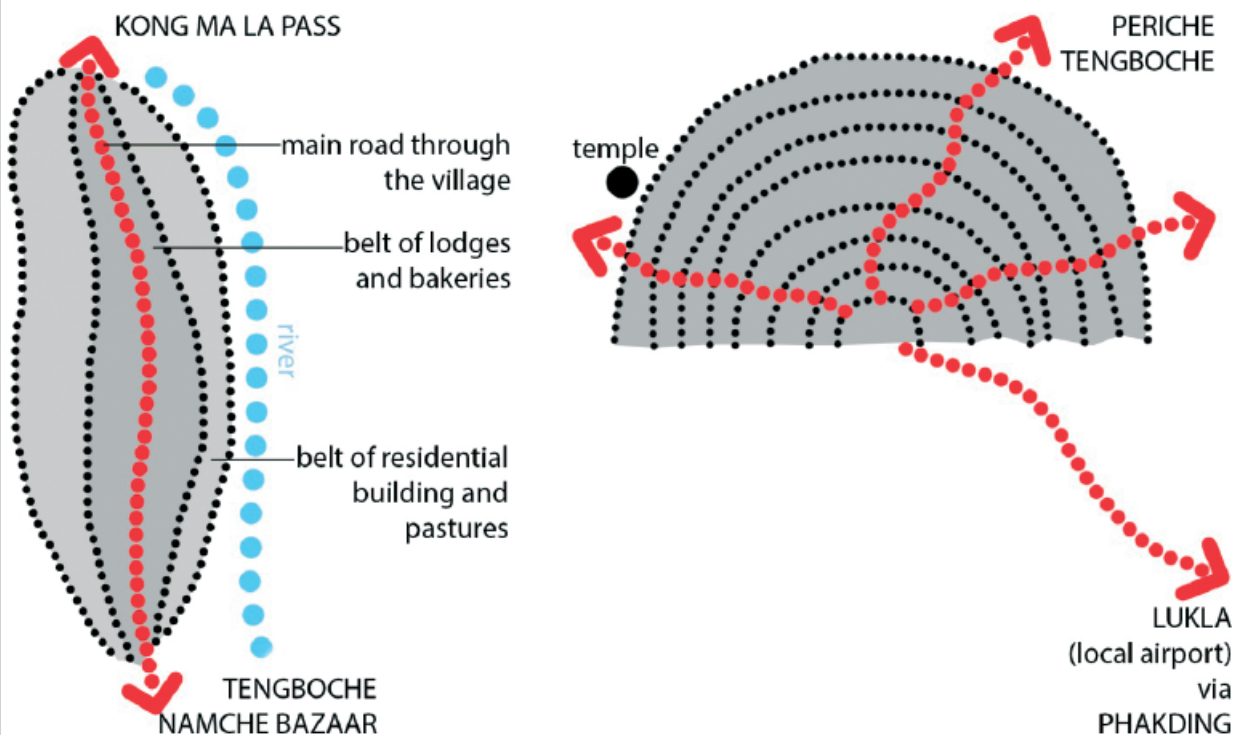


Figure 6.  
The spatial layout of the villages in the Himalayas, from the left: Dingboche, Namche Bazaar – acc. to the author's studies



Figure 7.

From the left: A shop on the trekking route; A lodge with a restaurant – short residence – photo by Anna Pawelczyk

## 6. GLOBALIZATION OF NEPALESE VILLAGES AND ITS IMPACT ON THE ARCHITECTURE

Tourism, which impacts the development of high-mountain villages, is concurrently a threat to their present character and aesthetics of architecture. All services offered to tourists have western standards in order to provide them with a maximum comfort. It results in the decline of the local culture – *being* – and travelers' deprivation of the opportunity to cognize it. An ephemeral *genius loci* is waning. Invoking the definition of *residing state* as a set of specified actions performed by a human, referring to perceived instances, it may be argued that the *mode of residing* is changing. For tourist, peculiar *compilation homes* are constructed, dissimilar to homes which are a philosophical metaphor of *home-edifices* [5]. The restaurants offer, apart from typical Nepalese dishes, also pizza, spaghetti and other dishes characteristic of the global cuisine. The Nepalese have adapted, popular in Europe and America, bakeries with tortes and cakes and cafes. Every lodge has access to wi-fi. The phenomena of globalization and commercialization, strongly visible in everyday topics, have their reflection in architecture. It is not following modernism, it is utilitarianism manifested in the search for a functional system of the object which will maximally meet expectations and needs of incomers with the lowest financial outlay. An additional effect is the coloristic variety. A typical Sherpa lodge usually has the texture of a natural rough stone, on the other hand, hete-

rochromatically painted lodges stand alone in the eyes of tourists.

## 7. A CHARACTERISTIC LAYOUT OF THE CONTEMPORARY HIMALAYAN LODGE AND ITS FEATURES

Bill Bryson noticed that houses “may actually take any shape, be built of almost any material and have any size. And yet (...) at first sight dwelling houses are recognizable” [9]. It is difficult to disagree with this statement. However, while analyzing examples of lodges in the Himalayas, characteristic features of such construction objects can be isolated. The studies of the configuration of object projections comprised lodges in Dohle, Gokyo, Gorak Shep and Dingboche. The field of research was determined on the basis of two assumed criteria. The first one, was the opportunity of empirical cognition of the object in accordance with the interpretation method, the action taken by a researcher should be the overview of examined construction objects [1]. The next criterion of selection was adoption to the research both the construction objects located on the main, busiest route, as well as those located on the alternative path. This selection allows to obtain a wider picture.



Lodges have a typical functional diagram with repetitive elements. The essence of each home is the place to prepare meals. It arises from basic human needs [10]. The kitchen and the dining area are equally important rooms in every lodge. In the dining room there is the fireplace heated with yak droppings, tables and chairs set up around it and benches on the room perimeter. Every tourist spends most of the time there. There are toilets and a shower in the immediate vicinity. The wing of the building accommodates guest rooms connected with the kitchen and the dining room. In the middle, there is a corridor with rooms located alongside it. In Nepal, double rooms and less frequently treble rooms are designed.

The first described construction object is the lodge in Dhole village. There are two objects performing this function. Dhole is not situated on the main, shortest route. Slightly fewer trekkers decide to go over there. The selected lodge has a functional diagram of the projection representing the letter “L”, which is the most frequent in the region. The identical functional diagram has i.a. the lodge in Phangga village. It is a single-story building. The shorter segment is the dining area and the kitchen, typical of every lodge; the longer one is occupied by guest rooms. The room furnishings consist of wooden beds and bedside tables.

The selected for analysis lodge in Gokyo has the same arrangement of utility functions, with the division into two buildings. It is the second lodge which meets the criterion of location on the alternative route. The residential part has an independent entry to the catering part. For tourists it is a less favorable solution. In the evening the temperature drops considerably, which brings a big difference in temperature between the interior and the exterior. Thus the return from the dining area to the room is not comfortable.

Gorak Shep is the village which is the highest and closest to Everest Base Camp. Due to the distribution of lodging places and optimal scheduling of the route, almost every tourist heading for the base camp has to stop there. The ground floor projection, formed atri-ally, is distinct from the previous ones. It is a two-story construction object. Apart from the main dining room, there is a spare room furnished with benches and tables. The wing closing the atrium is entirely a residential space and has the separate entrance. It was probably built later than the main part of the lodge.

The last analyzed example is the lodge in Dingboche, situated on the main trekking route. There are several lodges in the village, the object selected for the studies is located on the outskirts of the village. The main part is a mirror reflection of the lodge in Dhole. The second building with a different layout was probably built at a later time. Two rooms were connected with the vestibule and the toilet situated in the middle.

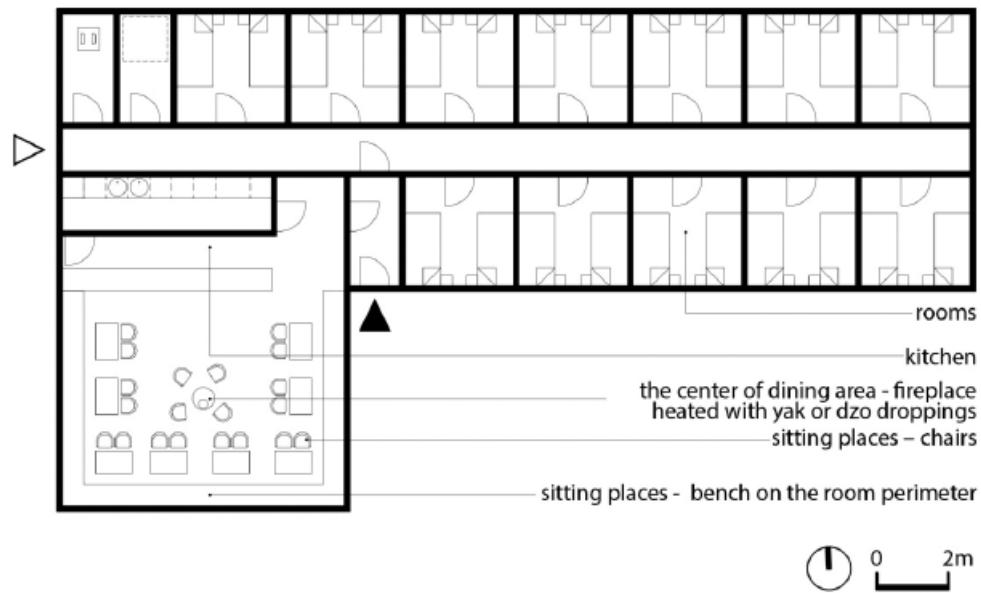


Figure 9.  
The diagram of Dhole lodge – acc. to the author's studies

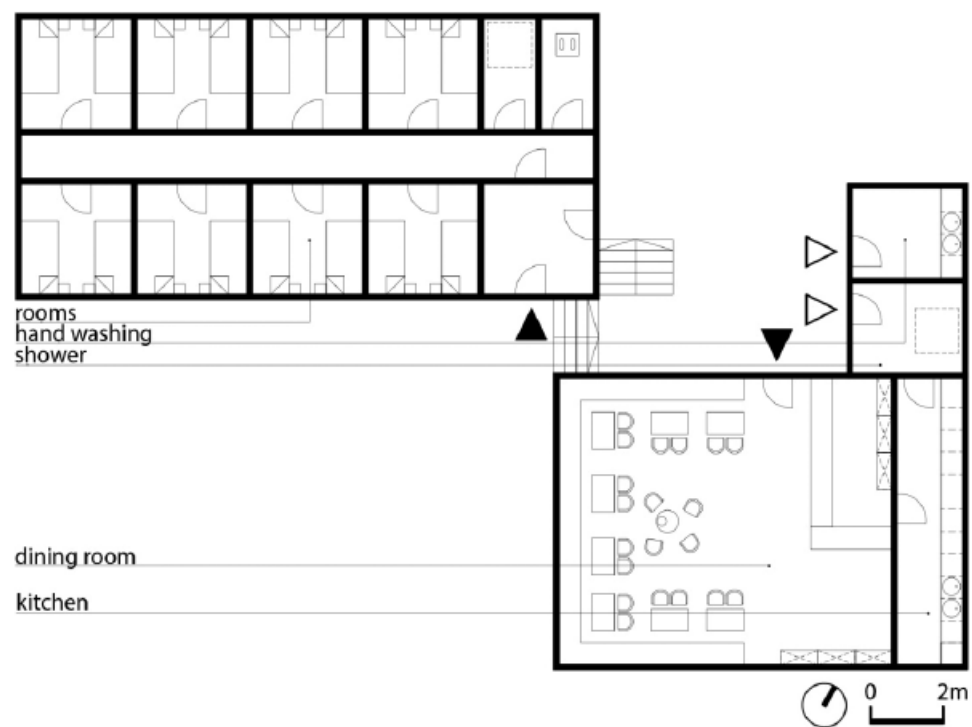


Figure 10.  
The diagram of Gokyo lodge – acc. to the author's studies

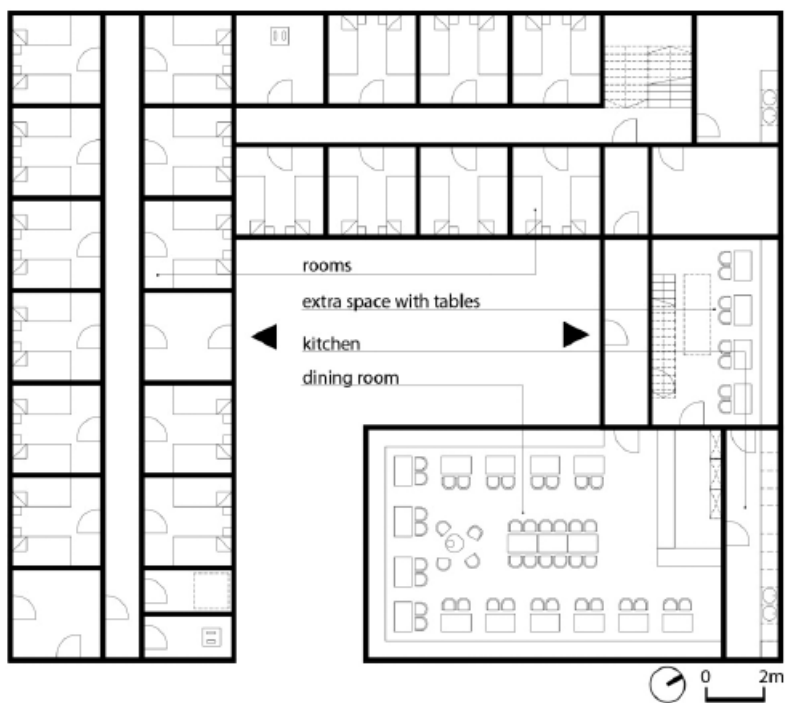


Figure 11.  
The diagram of Gorak Shep lodge – acc. to the author's studies



Figure 12.  
The diagram of Dingboche lodge – acc. to the author's studies

## 8. CONCLUSIONS

The above interpretation studies, carried out by the author on the basis of selected villages and lodges in the Himalayas, allow to draw the following conclusions:

- residing is both the object, that is home within the meaning of a building, though primarily it is functioning of a human in space – the state of being determined by all performed actions;
- residential buildings are stark, unsophisticated and their beauty consists above all in the harmonious integration into the landscape;
- high-mountain architecture, which is the emanation of residing in the mountains, can be divided into three categories: objects for permanent residence, temporary residence and places for short residence;
- lodges may have a various number of stories or forms, e.g. atrial or linear, though the layout of functions is a secondary, repetitive thing;
- the most important space in every lodge is the kitchen and the dining room, where tourists spend most of the time;
- based on the analysis of the foregoing processes, it can be claimed that the architecture of Nepalese villages will still develop; with the growing interest in trekking, further facilities of lodges, restaurants or bakeries will be built; the phenomenon of *compilation home* created for tourists will be more and more frequent.

## 9. MATERIALS AND MEDIA

The construction of lodges is traditional: depending on the time of building, location or wealth of the owner it can be stone or wooden. Walls are made of stone or chipboards in case of a wooden structure. Building partitions, both horizontal and vertical, do not have any thermal insulation. The roof structure is covered with corrugated metal sheets or plastic.

The media supply of lodges is provided in the simplest way. Water is channeled from mountain springs by means of rubber hoses. It is heated by gas bottles or solar plates. In higher parts of mountains, the construction objects do not have any sewage system, toilets function as cesspools. Electricity is provided by solar panels.

## 10. DETAILS

The architecture of contemporary lodges in the Himalayas is simple, primitive, but genuine. Its sincerity is an expression of cost-saving in meeting the most essential needs. The most important aspect is always the function of providing shelter, the basic need of every human. The construction objects are economical in detail and do not remind in their character Newar architecture, situated a few thousand meters lower, which delights tourists in Kathmandu with rich, lacy sculpture elements. The most ornamental elements are the windows arranged in strips; glazing occupies the largest, central strip of the facade. The characteristic lintel is completed with the wooden boards laid alternately, as presented in the figure below.

Apart from classical windows, lodges are provided with daylight by skylights in the roof. (Fig. 13). The roof truss is wooden, the board, occasionally punched, is put on the roof truss, and then the whole is covered with the metal sheet or transparent plastic.

Smaller elements and furniture are the complement for architecture in the Himalayas. Most of them were made for tourists. On the route one may often encounter mortared rubbish pits with the division into containers for waste sorting, and on the route from Lukla to Namche Bazaar toilets were built. In every village and often between villages, there are low walls serving villagers' own needs and for trekkers as the luggage support. The furniture in the lodges, as well as the construction objects themselves, is made from timber or stone and its aesthetics complies with the aesthetics of these very objects.

## 11. HOMINESS OF ARCHITECTURE IN HIMALAYAN LODGES

Wojciech Bonenberg, while writing about the space brand, constructs the criteria for its analysis. In reference to them, the discussed lodge was analyzed in terms of identity of the architectural brand [11]. Based on the research on story projections and the remaining observations it was claimed that lodges have the following features: hominess – relevant for social acceptance, legibility and cultural identification, expressed by means of applied materials and the form which, however, is gradually eliminated by the globalization factor. One should not look for prestige, fashion or uniqueness.

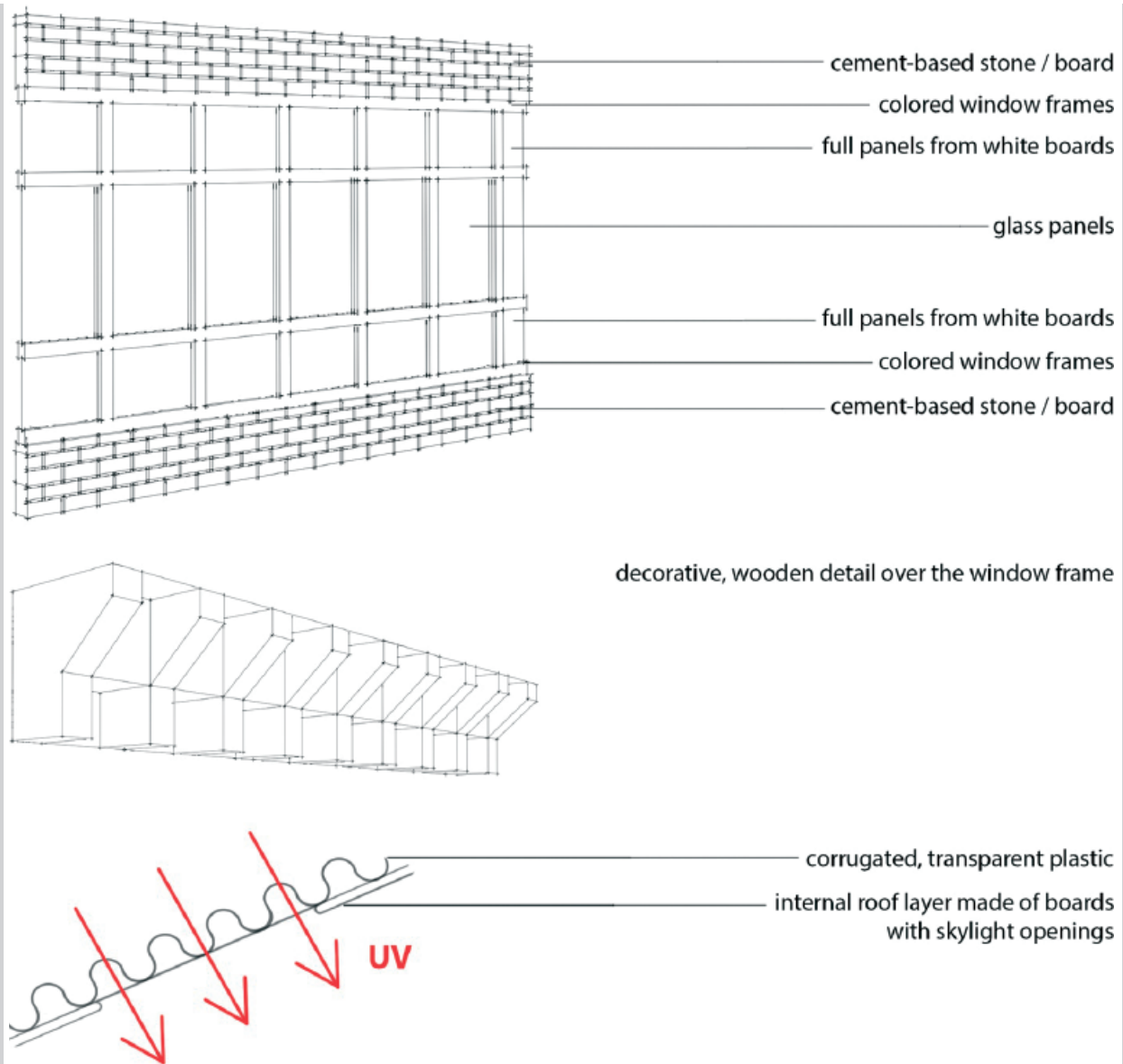


Figure 13.  
The sight and detail of the window, skylight – acc. to the author's studies

## 12. DIRECTIONS FOR FURTHER DEVELOPMENT OF HIMALAYAN LODGES

On the basis of the performed research, one may claim that:

- The purpose of the further development of Himalayan lodges can be the endeavor to gain the features, indicated by Wojciech Bonenberg, such as uniqueness and prestige, but above all maintaining and strengthening of cultural identification. This may be effected in a natural way as a consequence of economizing in the development

of construction objects designed to meet the most necessary needs.

- The globalization factor has a strong influence on all aspects of the *way of living*.
- The essence of lodges is their energy self-sufficiency. Solar panels provide the objects with clear, environmentally safe electricity.
- The objects of lodges in the Himalayas are ecological.
- The key issue in the described objects is their integration into the environment.
- The construction objects are simple and economi-



**Figure 14.**  
From the left: The table in front of a lodge; The rubbish pit for waste sorting – photo by Anna Pawelczyk

cal in detail. They do not remind traditional architecture in Kathmandu. Simplicity is their attribute.

- The architecture of lodges in the Himalayas is unpretentious and genuine. These features make the essence of the local housing.

### 13. SUMMARY

When assessing the architecture of high mountains one should remember Juhani Pallasmaa's words in his work *The Eyes of the Skin*: "The key mental task of the building structure is shelter and integration. (...) Architecture does not make us live exclusively in the world of creations and fantasies, but it serves the articulation of our experience of being in the world and strengthens our sense of reality and subjectivity" [12]. This is the primary task of the lodge. Each lodge is an objective to meet primary needs of a tourist or a climber.

The expansion of villages in the Himalayas is an inevitable result of increasing travel opportunities for people from all over the world. That process cannot be stopped. The process of village development is progressing too rapidly and the Himalayas are becoming too accessible. These are not favorable changes because the spirit of the place is being lost.

A proper indication for an inevitable development of lodge housing is inspired by an exceptional character of the mountains. Krystyna Dąbrowska-Budziło's words are a relevant comment: "The fact of the existence of the phenomenon, called the spirit of the place, obliges us to preserve it; to save both what contributes to its individual, unique quality and to the whole context. It is necessary not only to protect the places endowed with a peculiar atmosphere, but also to create them" [13].

### REFERENCES

- [1] Niezabitowska E.D. (2014). Metody i techniki badawcze w architekturze (Methods and research techniques in architecture), Wydawnictwo Politechniki Śląskiej, Gliwice, 51, 113, 143, 187–194 (in Polish).
- [2] Witkowska M. (2015). Góry z duszą (The mountains with the soul), National Geographic, Warszawa, 315–369 (in Polish).
- [3] <http://whc.unesco.org/en/list/120> (05.02.2017)
- [4] Heidegger M. (2004). Bycie i czas (Being and time), Wydawnictwo Naukowe PWN, Warszawa, 66–67 (in Polish).
- [5] Nawrot G. (2015). O współczesnych formach zamieszkiwania w mieście (On Contemporary Forms of Dwelling in the City), Wydawnictwo Politechniki Śląskiej, Gliwice, 41–42, 181–182, 192, 266 (in Polish).
- [6] Rocznik Statystyki Międzynarodowej 2015 (International Statistics Yearbook), Główny Urząd Statystyczny, Warszawa 2015.  
<http://stat.gov.pl/obszary-tematyczne/roczniki-statystyczne/roczniki-statystyczne/rocznik-statystyki-miedzynarodowej-2015,10,3.html> (06.02.2017)
- [7] <https://globaledege.msu.edu/countries/nepal/economy> (05.02.2017).
- [8] Statistical Pocketbook Nepal 2014, Government of Nepal National Planning Commission Secretariat Central Bureau of Statistics Ramshahpath, Thapathali Kathmandu, Nepal, 186.  
<http://cbs.gov.np/image/data/Publication/Statistical%20Pocket%20Book%202014.pdf> (05.02.2017)
- [9] Bryson B. (2013). W domu. Krótka historia rzeczy codziennego użytku (A brief history of everyday items), Zys S-ka Wydawnictwo s.j., Poznań. 39–40 (in Polish).

- [10] Maslow A. (1970). Motivation and Personality, Harper&Row, Publishers, 35–51.  
<http://www.peyc.eu/wp-content/uploads/2016/09/Motivation-and-Personality-A.H.Maslow.pdf>  
(14.03.2017)
- [11] Bonenberg W. (2012). Architektura jako marka miasta – na przykładzie aglomeracji poznańskiej (Architecture as a city brand – on an example of Poznan Metropolitan Area), Czasopismo Techniczne, Wydawnictwo Politechniki Krakowskiej, (in Polish)  
<http://suw.biblos.pk.edu.pl/resourceDetailsRPK&rId=12234> (06.02.2017)
- [12] Pallasmaa J. (2012). Oczy skóry. Architektura i zmysły (The Eyes of the Skin), Instytut Architektury, Kraków, 16, 83 (in Polish).
- [13] Dąbrowska-Budziło K. (2011). Genius loci jako potencjalne źródło inspiracji dla kształtowania krajobrazu (“Genius Loci” as potential source of inspiration for landscape shaping), Prace Komisji Krajobrazu Kulturowego Nr 15, Komisja Krajobrazu Kulturowego PTG, Sosnowiec (in Polish).