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# Building typology of Albanian *kulla* stone houses in the Balkans

Florina Jerliu<sup>1</sup> and Kaltrina Thaçi<sup>1\*</sup> 

## Abstract

This paper aims to establish a unified typology for the culturally significant *kulla* stone houses built in the cross-border region of Kosovo, Albania, and Montenegro during the 18th and 19th centuries. Despite some attempts at typological categorisation on the national level, a joint typology for this region currently needs to be improved. Based on existing literature and field research, the paper identifies the specificities of different geographical locations while validating the core attributes common to all typological variations. The findings suggest that the joint typological classification of *kulla* in the Balkans should primarily be based on architectural elements and, to some extent, setting, building materials and techniques, while functional composition is consistent across all types. The paper argues that defining a common typology for the Albanian *kulla* stone houses in the Balkans is crucial for evaluating, preserving, and developing *kulla* as serial properties and for their future regional development.

**Keywords** *kulla*, typology, cross-border region, Balkans, *Dyshekllek* gallery

## 1 Introduction

Vernacular architecture in the Balkan is rich in its variation in rural and urban settings. Among various architectural typologies, the authentic rural stone houses called *kulla* represent one of the most distinguished dwellings belonging to the Albanian culture (UNESCO 2004, 97–98). *Kulla* is deeply embedded in the historical, social and architectural significance of the Balkans. It reflects the way of life and building tradition in the region between the 18th and late 19th centuries, particularly in Kosovo, Albania, and Montenegro.

Despite its cultural significance, which has been vastly discussed by local researchers (Jerliu 2017, 47), only a limited number of *kulla* houses have been officially protected by the Kosovo, Albania, and Montenegro governments. In Kosovo, 160 *kulla* houses are under temporary protection, with the majority (69%) located

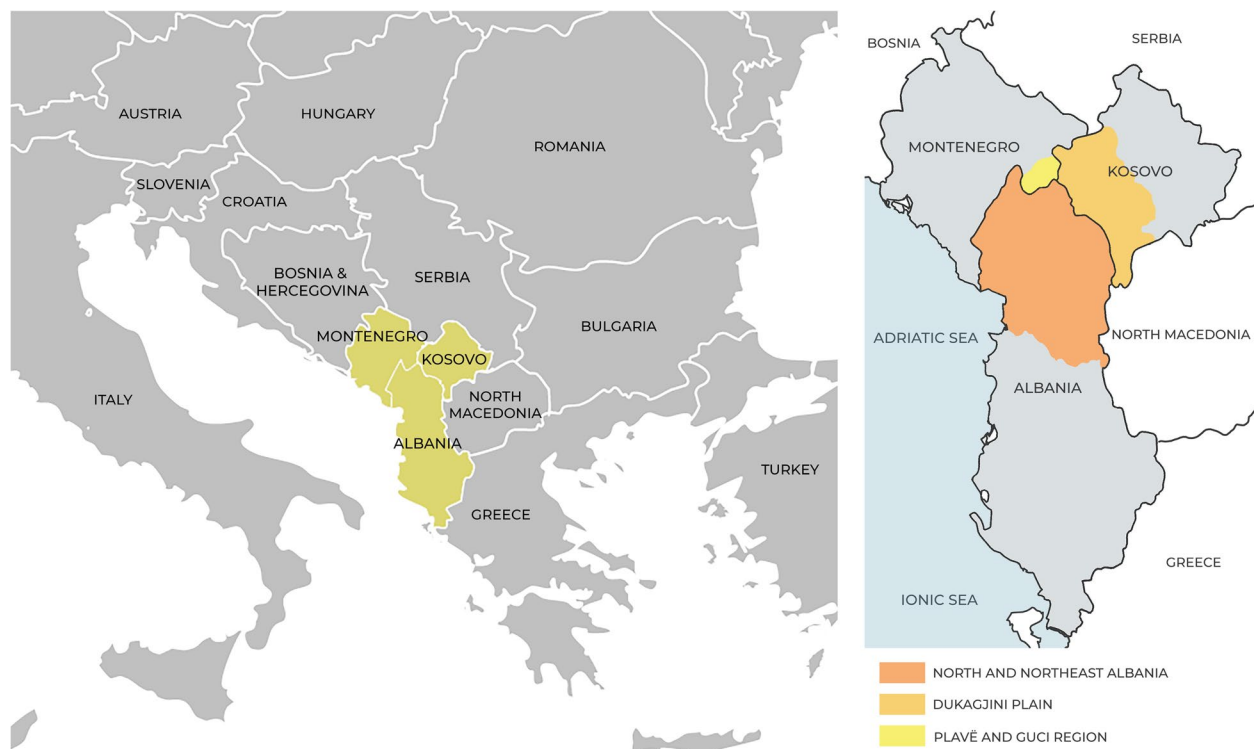
in the Dukagjini plain (MCYS of Kosovo 2021). In Montenegro, 55 *kulla* houses are preserved in the Plavë and Guci region, but only one is officially designated as a monument (Markišić, Islamska Epigrafika u Plavu i Gusinju 2016, 134–135). In Albania, out of the 2212 cultural monuments listed on the official website of the National Institute of Cultural Heritage, only 75 *kulla* houses and other urban dwellings in the Albanian Alps are officially designated as monuments (National Institute of Cultural Heritage in Albania 2021).

Furthermore, *kulla*, a typical vernacular architecture in the Balkans, is not well known internationally as most of the literature was written in Albanian and seldom written or translated into foreign languages. Existing studies tend to interpret and characterise *kulla* in the domestic national contexts of Kosovo, Albania, and Montenegro rather than in the wider cross-border regional context. Also, variations of *kulla* building typologies in these countries have not been comprehensively studied in the broader context in terms of their similarities and differences, apart from recent documentation conducted through the project 'Ilucidare', an EU-funded project which aimed to achieve capacity for professionals and

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**Fig. 1** Left: Map of Kosovo, Albania and Montenegro. Right: cross-border area distinct for the presence of *kulla* houses (Source: the authors)

civil society in the field of mapping *kulla* in the cross-border region of Kosovo, Albania and Montenegro during 2020–2021 (Ilucidare 2021).

This study aims to introduce and analyse the building typology of the rural *kulla* in the cross-border region of Kosovo, Albania and Montenegro by bringing together the existing literature, focusing on the typological studies by local scholars Krasniqi (1979), Doli (2009), Drançolli (2001), and Beqiri (n.d.), as well as field research conducted as part of the Ilucidare project, and additional on-site study carried out by the authors.

## 2 Building typology of *kulla*

The rural *kulla* can be found in settlements spread across the Albanian Alps, in the cross-national borders area of Kosovo, Albania and Montenegro, specifically in the Dukagjini Plain of West Kosovo, the Gegnia Highlands of North and North-East Albania, and the Plavë and Guci region of South-East Montenegro (Fig. 1).

Various scholars and recent local research projects have tried to define the different types of *kulla* found in these regions. In Kosovo, scholars such as M. Krasniqi, F. Doli, F. Drançolli, and A. Beqiri defined the *kulla* typology based on the *dyshekllek* gallery, whereas in Albania, the NGO Go 2 defined the typology of *kulla* in Malësia e Gegnisë based on their layout, construction and

architectural elements. In contrast, the study of *kulla* houses in Plavë and Guci in Montenegro is minimal, lacking a defined typology in the existing literature.

The paper aims to identify similarities and differences of *kulla* in these countries to contribute to formulating a joint building typology of Albanian *kulla* in the Balkans based on their setting, architectural elements, functional composition, building materials and technique.

### 2.1 The setting

#### 2.1.1 Neighborhood level

Rural *kulla* stone houses in cross-border villages are typically organised into neighbourhoods where the residents of the same tribe live. In almost all cases, the families in a neighbourhood are descendants of a common ancestor. For instance, in the village of Junik in Kosovo, there are seven neighbourhoods with members of 11 different tribes. Similarly, in the village of Nivokaz, as in Kosovo, there are as many tribes as neighbourhoods (Beqiri n.d., 62). This pattern of neighbourhood-based organisation is also seen in the villages of North Albania and Plavë and Guci in Montenegro. Field research conducted in Valbona, Albania revealed that *kulla* houses were also grouped based on family neighbourhoods (Fig. 2).

The clusters of *kulla* in these villages have evolved around the first built *kulla* house, which is always



**Fig. 2** Area distinct for the presence of *kulla* houses (Source: the authors)

dominant, and are placed along the main street, sharing one sidewall with the main surrounding wall of the cluster (Fig. 3). This creates a solid fortifying wall that protects the neighbourhood. As families grew beyond the capacities of these buildings, *kulla* houses grew correspondingly, with additional prismatic volume additions on either side (Doli 2009, 120) (Fig. 4). Nowadays, families build new houses in the setting of their *kulla* houses to accommodate their actual needs, while still preserving the auxiliary buildings and agricultural lands.

### 2.1.2 The *kulla* yard

The *kulla* unit is a small architectural ensemble, which varies in rural areas depending on location, family economy, and number of family members or tribes. It typically consists of a circumscribed land area with a *kulla* house in the centre, surrounded by auxiliary facilities such as toilets, agricultural lands, and areas for processing agricultural and livestock products. The shape of the ensemble is determined by the terrain and property boundaries (Fig. 5).

In Kosovo, whether in rural or urban areas, a *kulla* unit typically features an outer gate connecting them to the road. The surrounding walls are usually constructed using the same materials and techniques as the houses, such as stones or adobe. In some suburban areas, houses

were encircled with reed. These houses typically have one courtyard, but occasionally they have two or three courtyards. Apart from the *kulla* house, the main auxiliary buildings, found within the courtyard, include a well, granary, and corn crib.

In Dukagjini, Malësi e Madhe, Puka and Mirditë (Albania), the *kulla* units in certain areas are circumscribed by fences with timber sticks or tree branches, while in Diber, Mat and in the areas of Malësi e Gjakovës (Albania), high stone walls over 2 m and thick up to 1 m are used for protection (Lleshi 2020). On the other hand, the *kulla* units in Plavë and Guci are usually circumscribed with light timber fences (See settlements in the map in Fig. 2).

### 2.2 Architectural elements

The *kulla* is a compact, cube-shaped structure with a nearly square floor plan, measuring around 10 by 10 m and reaching a height of 10 m. The facade is heavily fortified with small windows and shooting holes (known as *frengji* in Albanian). While most *kulla* houses have three floors, some have four. The ground floor was traditionally used as a barn for cattle, the first floor had bedrooms, and the second floor contained the 'guest chamber' (or 'men's chamber', in Albanian *oda e burrave*), which served as the primary meeting place for the community's men (Krasniqi 1979, 327). The resemblances in the design





**Fig. 3** *Kulla* houses in the Mazrekaj neighbourhood, Dranoc (Source: the authors)

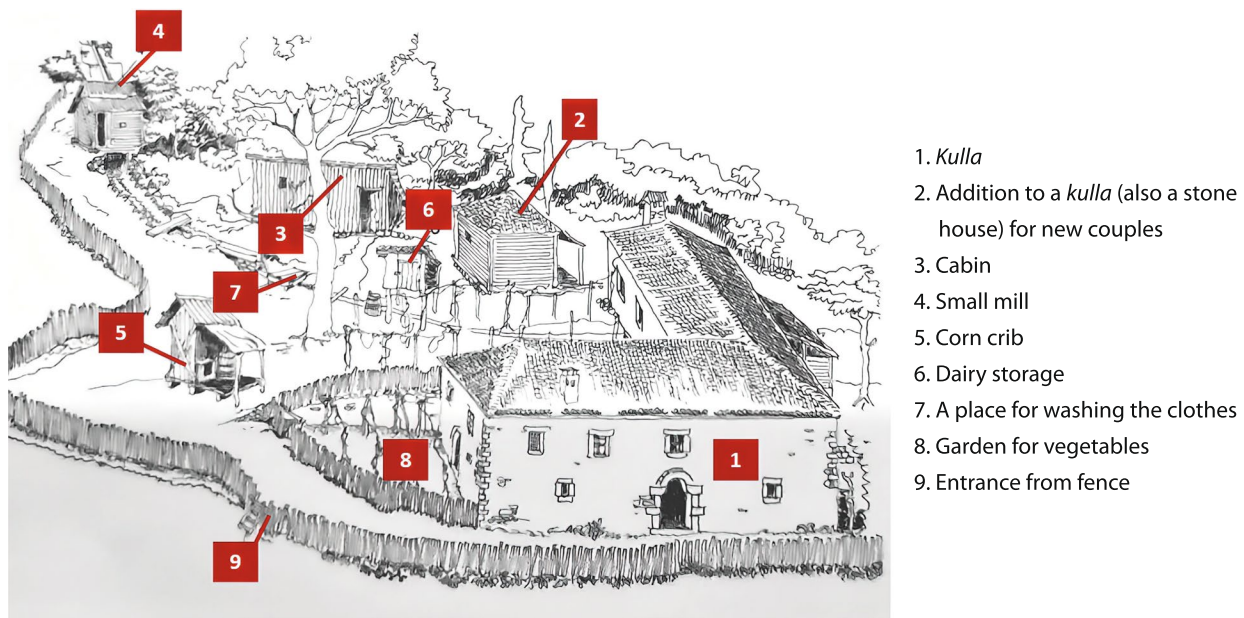


**Fig. 4** Left: *kulla* houses in Dranoc, Kosovo, 2021. Right: additions (new houses) to *kulla* (older structure) in Vallbona, 2021 (Source: the authors)

and construction of *kulla* in Albanian territories can be traced back to the shared lifestyle of the Albanian people, encompassing both socio-cultural and economic aspects. The patriarchal hierarchy, prevalent in Albanian families where multiple generations (Krasniqi 1979, 242, illustrates in his book that up to eight generations lived in one *kulla*) often cohabit in the same residence, is evident in the internal organisation and hierarchy of these familial units. This structure is further influenced by the Albanian code of conduct known as *Kanun of Lekë Dukagjini*, a customary legal code that governed parts of northern Albania and western Kosovo, named after the medieval prince *Lekë Dukagjini*. The *Kanun's* influence is ingrained

in the *oda e burrave*, symbolically representing the *kulla's* identity (Thaçi and Jerliu 2023, 127).

Although *kulla* houses in the cross-border region share similarities in structure and layout, they also have unique characteristics, especially in exterior architectural details. Analyses found that the positions, materials, and details of the protruding gallery on the facade varied between regions, as did the shapes and materials of the roofs. *Kulla* houses in the mountainous areas of northern Albania and western Montenegro have pitched roofs covered with timber boards, while those in the lower altitude Dukagjini Plain in Kosovo have lower roofs covered with adobe hollow tiles. These differences can be attributed to



**Fig. 5** The *kulla* yard in the village Qelëz, Pukë (Source: Thomo 1981, edited by the authors)

different ways of life, economies, and the materials available in each region.

### 2.2.1 Typology studies in Kosovo

One of the early studies on *kulla* houses by M. Krasniqi has served as the basis for the *kulla* typology studies (Krasniqi 1979). Most researchers have classified *kulla* into two primary categories based on age. This division is determined by the material used in the construction of the protruding gallery, known in the local dialect as *dyshekllek*. The *dyshekllek* gallery is an architectural feature of *kulla* that serves as an entrance hall to the *oda* e

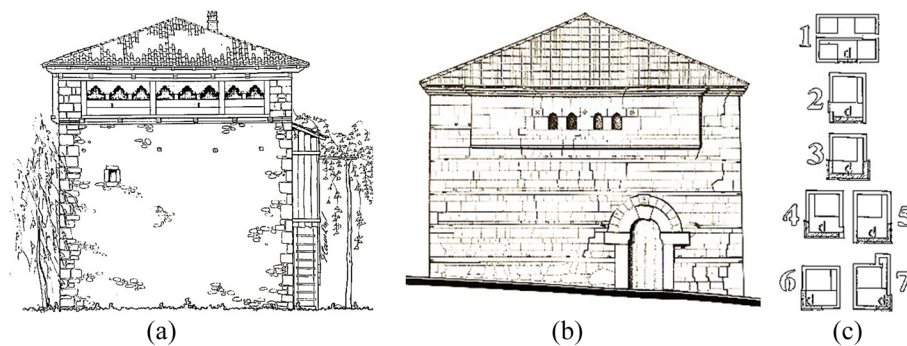
*burrave* and is located on the upper floor. It protrudes about 20–25 cm from the main facade and has multiple windows. The gallery is typically made of stones, but there are also versions made of timber. It can be found on one part of the facade or a corner. *Kulla* houses with timber *dyshekllek* galleries date back to the late 17th century, while those with stone galleries are from the 19th or 20th century (Figs. 6, and 7a–b).

Later on, Doli categorises *kulla* into seven types based on the position of the *dyshekllek* gallery: (1) projecting out from the centre of the perimeter wall of the longitudinal facade of the *dyshekllek*; (2) projecting out along



**Fig. 6** Left: *kulla* of Osdautaj family in Isniq, Kosovo, with timber *dyshekllek* gallery, 2021. Right: *kulla* of Isuf Mazrekaj family in Dranoc, Kosovo, with stone *dyshekllek* gallery, 2021 (Source: the authors)





**Fig. 7** *Kulla* with timber (a) and stone (b) *dyshekllek* galleries in the Dukagjini Plain; (c) The typology of *kulla* according to the position of the *dyshekllek* gallery (Source: the Doli 2009, 201, 199, 192)

the whole length of the perimeter wall of the longitudinal facade of the *dyshekllek*; (3) projecting out along the whole length of the perimeter wall of the longitudinal facade of the *dyshekllek* and partly stretches out of both side walls; (4) projecting out along the whole length of the perimeter wall of the longitudinal facade of the *dyshekllek* and partly stretches out of the left side wall; (5) projecting out along the whole length of the perimeter wall of the longitudinal facade of the *dyshekllek* and partly stretches out of the right-side wall; (6) projecting out of the left corner; and (7) projecting out of the right corner (Doli 2009, 107–108) (Fig. 7c).

A recent study from A. Beqiri further divides *kulla* into sub-typologies, deriving from the main division according to their age and the material (timber, stone) of the *dyshekllek* gallery. According to Beqiri, the timber gallery has three sub-variants: (1) extends in the whole front facade of the highest floor, partially in two cross facades; (2) along the entire length of the front facade; and (3) at the corner of the building where two perimeter walls join. The stone gallery has four sub-variants: (1) extends across the entire front facade and partially in two cross facades; (2) extends across the entire front facade and partially in one cross facade; (3) only extends on the front side of the upper floor, including 3a sub-variant with no stone gallery; (4) in the corner of the two perimeter walls, which is the most characteristic sub-variant (see Table 1) (Beqiri n.d., 62–63).

After cross-examining studies on *kulla* typologies in Kosovo, it was found that Beqiri did not mention Doli's Type 1 *kulla* with *dyshekllek* gallery only in the middle segment of the facade. This may be because Beqiri considered it irrelevant and included it within the framework of Doli's Type 2. On the other hand, Doli did not mention Beqiri's subvariant 3a in his categorisation but may have considered it part of his Type 1. Even though Doli omitted *kulla* without *dyshekllek* gallery in his typology palette, he still identifies them in his book (Fig. 8).

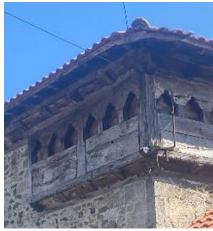








## 2.2.2 Typology studies in Montenegro

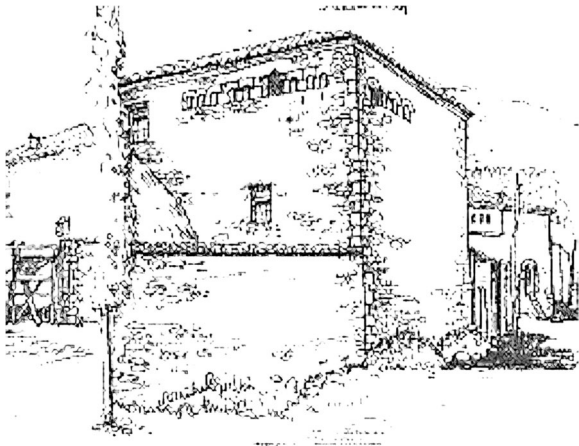
*Kulla* houses in Montenegro are mainly found in the mountainous regions of Plavë and Guci, located in the border area with Kosovo and Albania. This region displays a variety of *kulla* typologies, which differ in construction methods, materials used, and decorative elements. In the course of field studies, three different types were identified. Type 1 consists of *kulla* houses with a *dyshekllek* gallery, similar to those found in Kosovo and including all the subtypologies described above. Type 2 consists of *kulla* houses each with a timber balcony known as *krevet*, which can also be found in Albania. Type 3 is the Alpine *kulla*, which can have either a *dyshekllek* gallery or a *krevet* balcony (see Fig. 9, Table 2).

The first type of *kulla* is the unique vernacular construction in the Plava and Guci regions, with similar constructions throughout Kosovo and northern Albania. They are likewise characterised by a square layout, often rising on three floors. As in Kosovo, the ground floor was traditionally used as a barn, while the upper floors were occupied by family members, with the most representative floor being the upper floor with the *oda e burrave*. Based on field observations, *kulla* houses in Plavë are highly decorative, while those in Guci are simpler. Decorative elements are mainly found around the openings and the shooting holes under the roof canopy. The gallery is an integral part of the structure, appearing either in timber or stones and on the top floor in various positions, protruding in one of the facades and/or on the corner of the building.

*Kulla* houses with *krevet* balconies are common in the suburbs of Plava, Gucia, Valbona, and Theth. The *krevet*, also known as *shameshi* in the Kelmendi area, is a wooden structure placed on the facade of a *kulla*. It served as the main entrance when the ground floor was used as a barn and was primarily located on the front facade but could also be found on the side. The *krevet* had a dual function: it served as an entrance to the

**Table 1** The typology of *kulla* according to the position of the *dyshekllek* gallery, based on A. Beqiri

Timber <i>dyshekllek</i> gallery		Stone <i>dyshekllek</i> gallery	
			
Type 1 corresponds to Doli's Type 3			Type 1 corresponds to Doli's Type 3
Type 2 corresponds to Doli's Type 2			Type 2 corresponds to Doli's Type 4,5
Type 3 corresponds to Doli's Type 6, 7			Type 3 corresponds to Doli's Type 2
			Type 4 corresponds to Doli's Type 6, 7



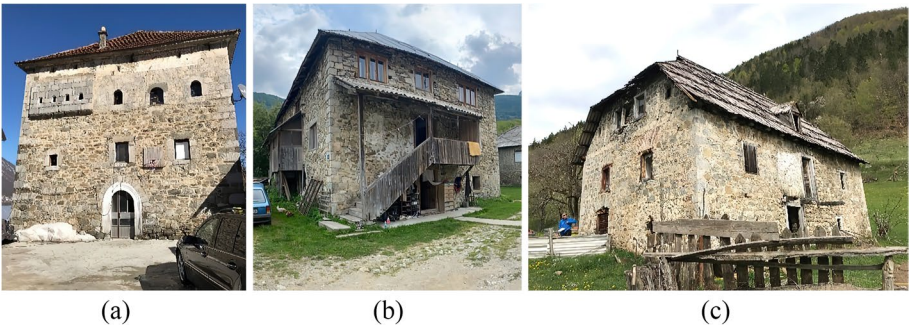
**Fig. 8** *Kulla* without *dyshekllek* gallery, sub-variant 3a according to A. Beqiri, a sketch by F. Doli (Source: Doli 2009, 193)

building and a storage place for food. Typically, the *kre-vet* was located on the first floor, but there were some cases where it was located on the second floor. Its width could reach 1 m–1.5 m and was usually built entirely of

wood, although in cases where the stairs were exposed to rain, it was constructed with stones.

Alpine-type *kulla* houses are built in high-altitude alpine areas and are distinguished by their unique shape, size, and, most notably, their pitched roof. The roof is designed to effectively remove snow, consisting of two longitudinal slopes with large surfaces and two smaller sloping surfaces above the cross facades. Alpine-type *kulla* also has three floors, with the ground floor used as a barn and the upper floors used by family members. Such *kulla* houses are usually occupied by two families and have two separate entrances, either on opposite sides of the facades or on two adjacent facades.

Beqiri states that *kulla* houses in the Plavë and Guci areas have similar size and arrangement to those found in the Dukagjini Plain in Kosovo. The only difference between them is the roof design and materials used, which were modified to adapt to the distinct weather conditions in these regions (Beqiri n.d., 63). Due to its characteristic appearance, however, the Alpine-type *kulla* should be considered a different type, even though it is a derivative of the unique weather conditions in the area.



**Fig. 9** (a) Type 1 with a *dyshekllek* gallery, 2021; (b) Type 2 with a *krevet* balcony, 2021; (c) Type 3 Alpine *kulla*, 2021 (Source: the authors)

**Table 2** The typology of *kulla* in Montenegro

Type 1 <i>Kulla</i> with a <i>dyshekllek</i> gallery (same as in Kosovo and Albania)		Type 2 <i>Kulla</i> with a <i>krevet</i> balcony (same as in Albania)	
Type 3 Alpine <i>kulla</i>  With a <i>dyshekllek</i> gallery (same as in Albania)			with a <i>krevet</i> balcony (same as in Albania)

2.2.3 Typology studies in Albania

The field research conducted on *kulla* houses in Albania identified different typologies based on facade elements, similar to the categorisation in Kosovo (GO2 Albania 2021) (Fig. 10). Type 1 contains a *dyshekllek* gallery, which has several subtypes, sometimes viewed as distinct types due to their differing names (local jargons). This paper categorises them into Type 1a with *çikma* gallery and Type 1b with *qoshk*. *Çikma* is a slightly protruding gallery/element in the facade of the *kulla* and is about 40 cm raised. It is generally built into the door section or in a position that favours the surveillance of the area and the protection of the house. *Çikma* can be placed on one or more facades and is constructed of carved stone. On the other hand, *qoshk* is a more protruded gallery placed on the upper floor, built with timber and skillfully carved windows (Fig. 11). Type 2 is the house with a *krevet* balcony and Type 3 contains *teliz*, a timber protruding gallery that encircles the *kulla* on the upper floor and serves as an external covered corridor, storage, or toilet (Fig. 12), (see Table 3).

During the Ilucidare Project’s research in Valbona, various categories of *kulla* were identified based on their layout. Type 1 includes square and rectangular-shaped *kulla* houses, which aligns with the previously discussed categorisation of all *kulla* dwelling types. Type 2 includes L-shaped and T-shaped *kulla* houses, which are

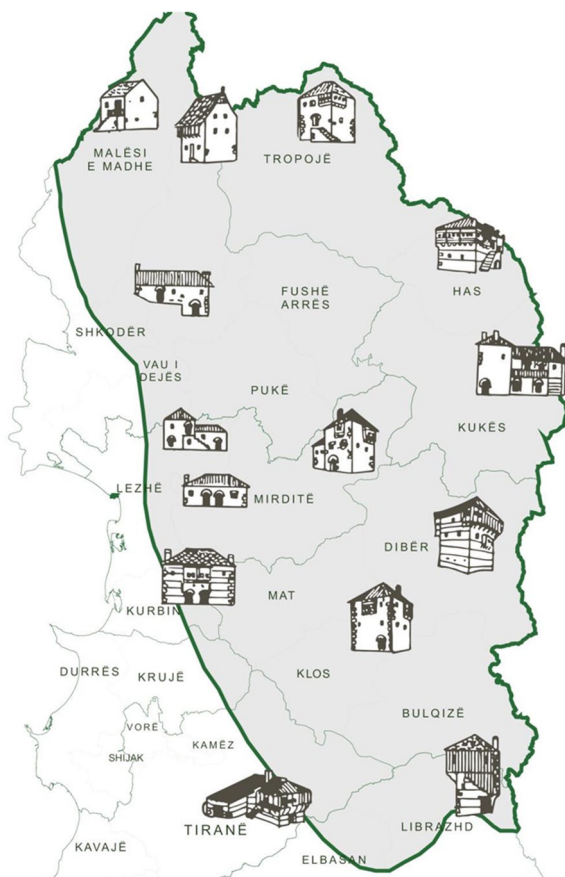
uncommon and mostly found in Dukagjini and Malësi e Madhe regions (Fig. 13).

2.3 The functional composition

The construction of *kulla* stone houses was intricately linked to the socio-political challenges of insecurity and persistent historical turmoil in the Balkans. Positioned strategically, these edifices were designed to afford panoramic views of the surrounding terrain, serving as essential sanctuaries and security bastions for Albanian families, especially during wars. Also, *kulla* functioned as communal spaces for hosting guests. Initially conceived for familial protection, *kulla* gradually transformed into symbols of prestige and fashion. Affluent families across the regions embraced the construction of *kulla*, perceiving them as embodiments of honour and respect. Importantly, *kulla* transcended economic boundaries, as middle-class families also engaged in their construction. The communal ethos was evident in the collaborative effort, with the community contributing materials and actively participating in the construction process (Thaçi and Jerliu 2023, 121, 126).

While every *kulla* house has its distinct layout, they share a notable commonality, indicating that the traditional artisans who created them viewed *kulla* as a collection of fundamental components arranged based on the occupants’ needs, particularly safety and essential living needs. Moreover, in rural *kulla*, the ground floor is





**Fig. 10** The distribution of the typology of *kulla* houses in the region of North Albania (Source: GO2 Albania 2021)

exclusively utilised as a barn for livestock, as opposed to being used for storage like in urban *kulla* (Fig. 14).

### 2.3.1 Barn (Ahuri)

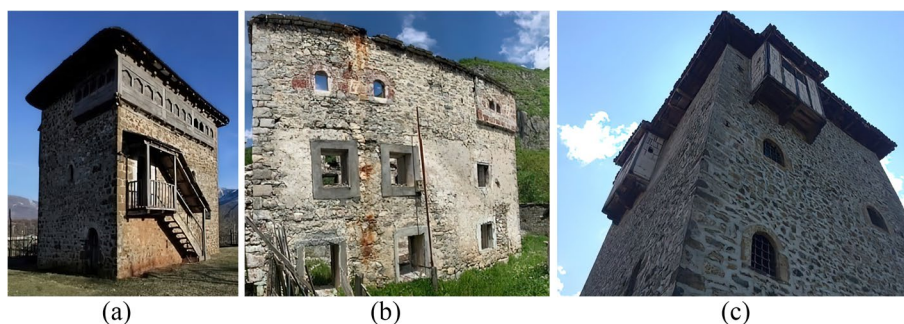
All *kulla* houses have a ground floor used initially as a dimly lit barn for livestock, with internal stairs leading to the family floor (Beqiri n.d., 60) (Fig. 15).

The barn is now almost non-existent, except in instances where families have constructed a new house on their property and have retained the *kulla* as a memento of the past. The organisation of the space in the barn depended on the type of animal held, and the flooring was made of stones or compressed earth, depending on the humidity of the ground. Lighting and ventilation were provided through small openings (shooting holes), and a timber column served as a foundation, with a small timber beam and a large timber beam connecting opposite walls of the *kulla*.

The entrance is a strong single door that cannot be opened from outside. Some *kulla* houses have the barn separated for other uses, and in those cases, the staircase to the upper floor is located outside (Krasniqi 1979, 344–345). The ground floor was used to keep cattle for two reasons. Firstly, because they were a valuable resource for families and needed to be kept in good condition, and secondly, because the heat from their bodies, especially during cold winters, would accumulate and be transmitted to the people living on the first floor. With some families having up to 400 cattle (Bardhi 1637), this heat was a significant factor.

### 2.3.2 Kitchen / 'Firehouse' (Shtëpia e Zjarrit)

The first floor of the *kulla* is where the family lives and is divided into small rooms for married couples, separated by light wooden walls. The women's room, also known as the kitchen or firehouse, is where food is prepared and eaten, and family life takes place. The size and organisation of this space vary based on family needs and tastes,







**Fig. 11** (a) Type 1 with a *dyshekllek* gallery (Source: Seci 2018); (b) Type 1a with *çikma*, Valbona, Albania (Source: the authors, 2021); (c) Type 1b with *qoshk*, Diber, Albania (Source: Regional Department of Cultural Heritage Shkodra, 2023)



**Fig. 12** (a) Type 2 with a *teliz*-covered corridor (Source: GO2 Albania 2021); (b) Type 3 with a *krevet* balcony, Valbona, Albania, 2021 (Source: the authors)

**Table 3** Typology of *kulla* houses in Albania

Type 1 <i>Kulla</i> with a <i>dyshekllek</i> gallery (same as in Kosovo and Macedonia)			subtype: 1a with <i>çikma</i>	subtype: 1b with <i>qoshk</i>
Type 2 <i>Kulla</i> with a <i>krevet</i> balcony (same as in Montenegro)				
Type 3 <i>Kulla</i> with a <i>teliz</i> -covered corridor (typical to Albania)				



**Fig. 13** Rare example of a T-shaped *kulla* in Has, Albania, 2021 (Source: the authors)

and it is typically larger than the guest room but less decorated (Beqiri n.d., 71). The firehouse has a pressed clay floor for thermal insulation and protection from fire and barn smells (Beqiri n.d., 72). The space is semi-dark and has a fireplace for cooking. It is the heart of the house,

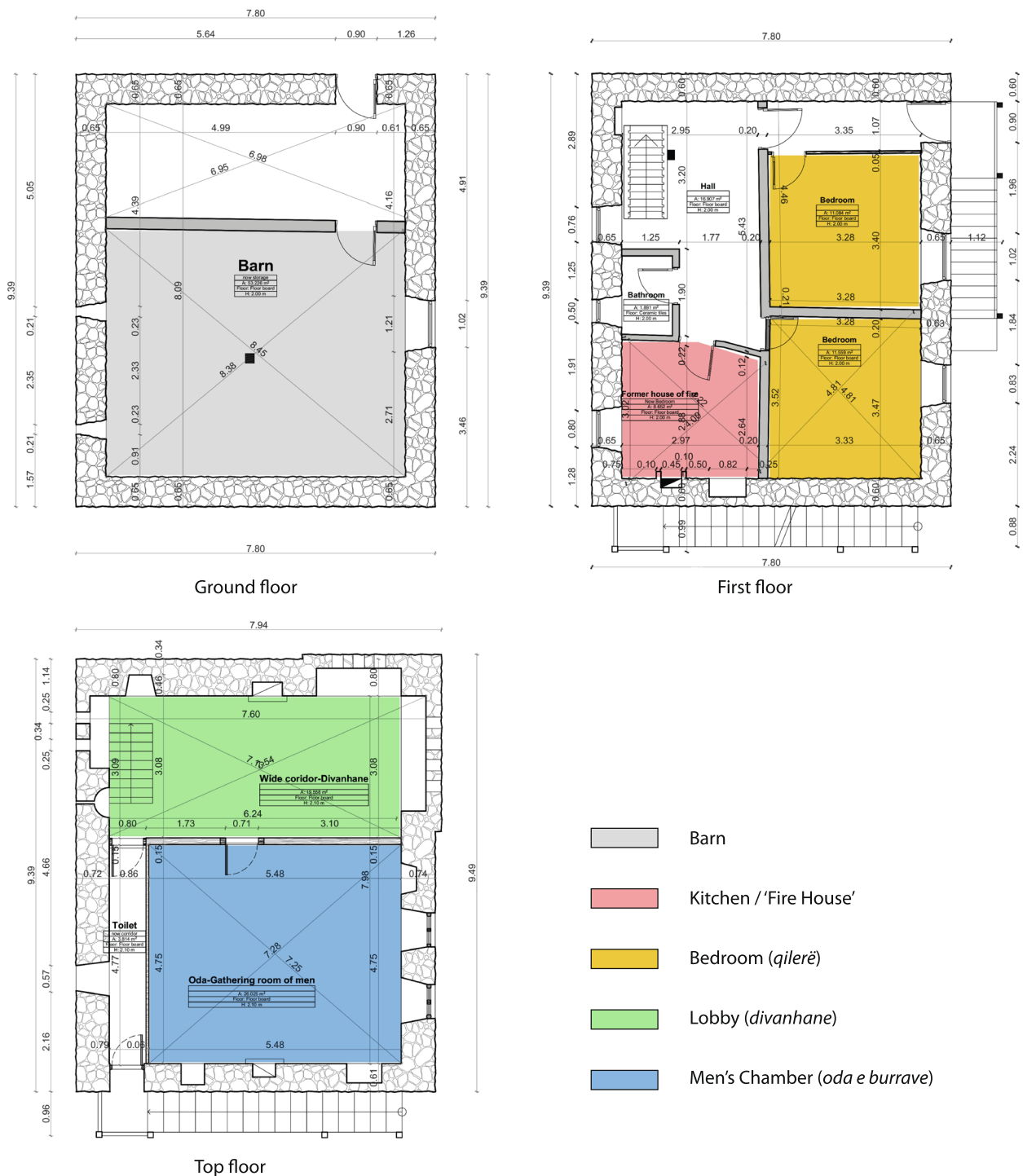
where the family gathers and children play while the men occasionally join in.

2.3.3 Bedrooms (*Qilerë*)

On the same floor as the firehouse, there are usually two or more separate small rooms, known as *qilerë*, which are bedrooms for married couples (Fig. 16). These rooms are built with simplicity and have well-pressed clay floors, wooden ceilings, lime-plastered walls, and wooden shelves for daily tools. There is a wooden bed and two or three decorated wooden crates for storage. Each small room has a designated place for bathing, separated by a wooden paravane. During winter, these rooms are heated by sparks from the fireplace. They are semi-dark with only a few small windows (Beqiri n.d., 72). These rooms are connected by a small lobby/*divanhane* (*divanhane e vogël*), which marks the boundary between the private family quarters and the *oda e burrave*.

2.3.4 Men’s Chamber (*Oda e burrave*)

The Men’s Chamber (*oda e burrave*) is the central room in an Albanian *kulla* and is located on the top floor, with a



**Fig. 14** *Kulla* of Isuf Mazrekaj in Dranoc, Kosovo (Source: the authors)

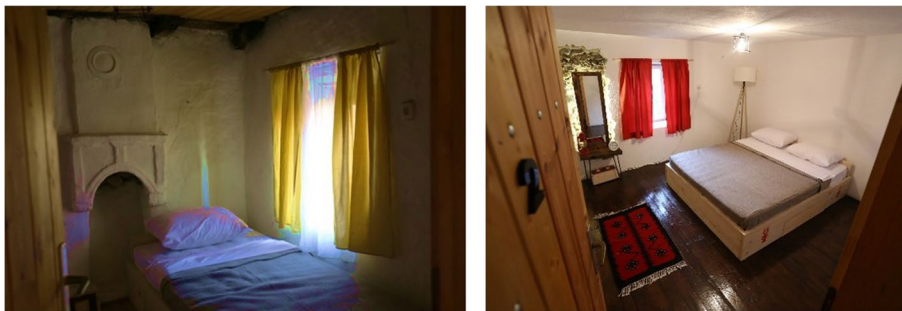
separate entrance (Fig. 17). It has a large fireplace, which is given special importance in its construction, and is lit when guests are present. *Oda e burrave* is divided into three special spaces, the guest room, the entrance hall, and the toilet, and is usually the same in all *kulla* houses

(Beqiri n.d., 70). The area from the door up to the fireplace is known as the *arallak* or 'between timbers' and is where guests sit, with the most honoured guest seated on the larger surface known as the 'big *cerga*' located closest to the fireplace. *Oda e burrave* is also where family

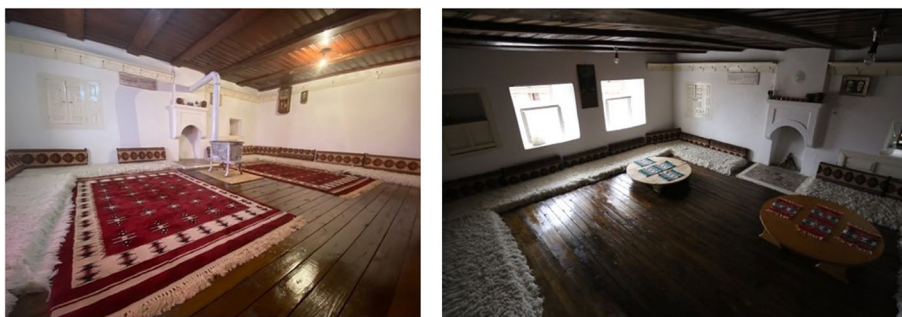




**Fig. 15** The barn in the *kulla* of Ramok Celaj, Vuthaj, Montenegro, 2021 (Source: the authors)



**Fig. 16** Bedrooms in the *kulla* of Isuf Mazrekaj, Dranoc, Kosovo, adapted as a guest house, 2021 (Source: the authors)



**Fig. 17.** *Oda e burrave* in the *kulla* of Isuf Mazrekaj, Dranoc, Kosovo, 2021 (Source: the authors)

ceremonies are held and where guests and travellers sleep at night. Also, dinner parties are common for the pleasure of hosting guests. *Oda e burrave* are social centres in the village, and families compete to have the most generous and popular one. This investment in hospitality is highly esteemed and can earn respect from the village (Becker 2003, 45).

### 2.3.5 *Dyshekllek* gallery (*dyshekllek*, *divanhane*)

The first floor of a *kulla* typically includes a wide corridor called *divanhane* with a platform used for sleeping in the summer (Fig. 18). The platform is called *dyshekllek* and has small arched windows that bring light into the space (Krasniqi 1979, 345). The *dyshekllek* gallery can be constructed with timber boards (Krasniqi 1979, 345)



**Fig. 18** *Divanhane* in the *kulla* of Isuf Mazrekaj, Dranoc, Kosovo, 2021 (Source: the authors)

or baked bricks and stones or only stones, which is the most typical construction also in Plavë (Markišić, 2016b, a, 56–57). The *divanhane* also has a shallow cabinet for dishes, a sink for washing hands, and sometimes a small fireplace for making coffee. The room has a timber dining table and is used for various household tasks. It serves as a connecting room to access the guest room and a natural ventilation source (Krasniqi 1979, 346). *Divanhane* has the most shooting holes in the walls and may have special channels for throwing boiled water in case of danger from external enemies (Krasniqi 1979, 71). It also provides access to a narrow corridor leading to the toilet, typically between the *oda e burrave* and the exterior wall. The toilet walls are often extruded into the facade and can be built as a console or from the foundations of the *kulla* (Krasniqi 1979, 346).

## 2.4 Building materials and techniques

*Kulla* houses were constructed with local materials, particularly stones found in nearby riverbeds. The walls of these buildings were primarily made up of round-shaped stones. Other materials used in their construction included timbers, mud, and bricks. In some cases, *kulla* houses were built with a combination of stones and bricks, with the ground floor made of stones and the other floors made of bricks with different patterns. The bricks used were often handmade, such as Khorasan bricks baked in kilns made of sand, chalk, water, and a little cement or mud. Interior walls and partitions were made of mud bricks, with mud also serving as a binding material or wood (Rassam, n.d., 3). Lime mortar was also used as a binding material for the stones and a plaster for interior walls.

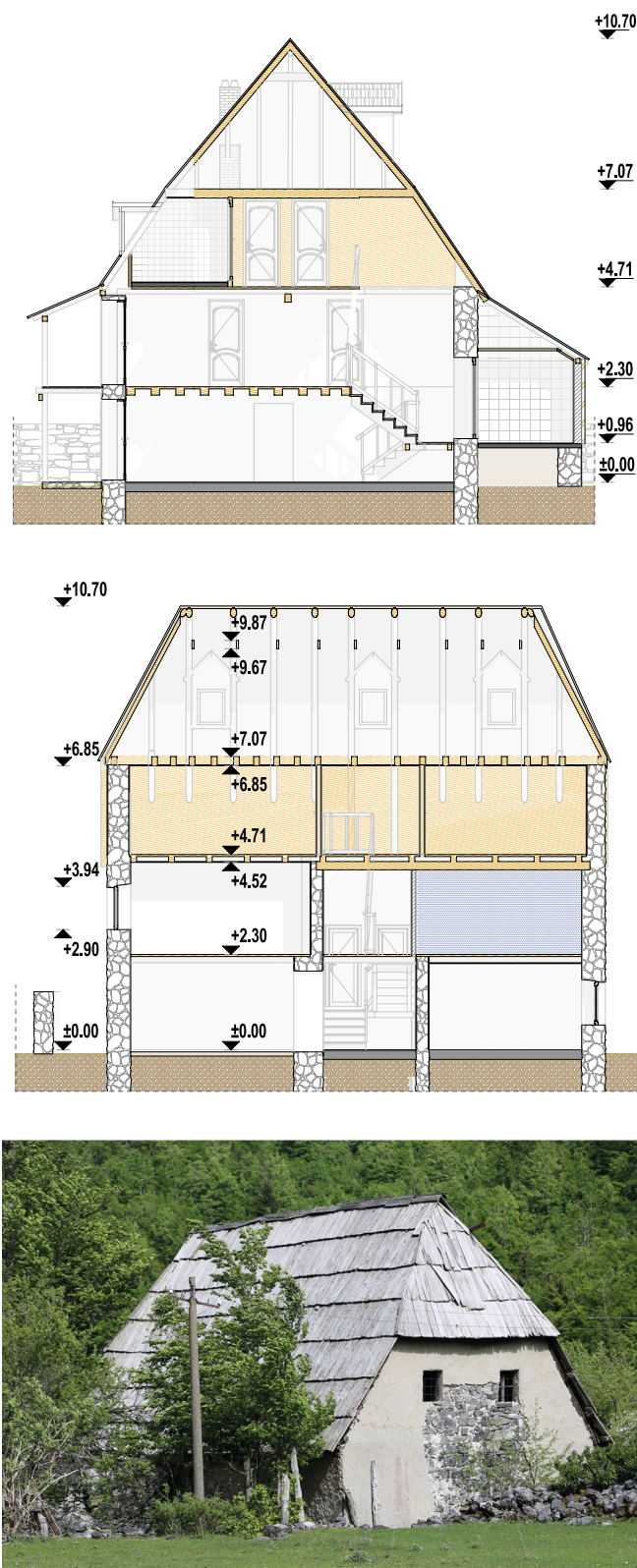
*Kulla* houses were constructed by craftsmen and workers from the Dibra region since ancient times involved

in masonry, stone carving, wood carving, and carpentry. These craftsmen were known for their empirical and ancient style, but the more experienced ones, as Ippen noted in 1907, could build European projects with ease (Ippen 1907). Constructing a *kulla* house was a lengthy process taking two to three years (GO2 Albania 2021). The walls, which served as the main load-bearing structure, were made of even thicker stone foundations and gradually decreased in thickness towards the upper floors (Krasniqi 1979, 344). The stones used were carved with straight and smooth angles. They were decorated with pagan, Catholic, and occasionally Islamic symbols, especially the stones used for the doorposts, corners of the walls, and door arches. In some villages, a 'pink' stone was used for specific architectural details. The *kulla* was typically cubic, ranging from 8 to 10 m in height, and the layout depended on the location (Beqiri n.d., 62). The walls varied in thickness, with thicker walls supporting more floors, and they were bound with mortar made of lime and sand and sometimes filled with pebbles. Overall, the aesthetics of these buildings were enhanced by the addition of *dyshekllek* gallery (GO2 Albania 2021).

To increase stability and elasticity, horizontal layers of oak or chestnut wood were laid every 80–120 cm and connected with shorter binders through the thick walls (Jaeger-Klein et al. 2019). Timber was also used to construct stairs, with some covered by a canopy to protect them from rain (Krasniqi 1979, 344). Wooden beams and planks were used for vertical divisions and sometimes for flooring. Wood was also used to divide interior spaces into rooms, make door and window frames, decorative elements, cupboards, and staircases (Rassam, n.d., 3). Chestnut, pine, and beech were commonly used. The roof of the *kulla* was constructed with timber, which gave them their hipped roof profiles. Timber was also used for defence purposes, where staircases could be burned in case of an enemy attack or emergency (Limani, n.d., 6).

The initial roofs in various regions, such as Kelmendi, Dukagjini, Tropoja, Puka, Mirdita, etc., had a slight angle and were covered with stone slabs. In some parts of Mirdita, Mat, Dibra, and Kukës, even today, roofs have a lower angle and are covered with stone slabs or tiles (GO2 Albania 2021). *Kulla* houses in Dukagjini plain in Kosovo were also constructed with a low-hipped roof, usually covered with hollow tiles and less than 30° in angle. However, in North Albania and the regions of Plavë and Guci (Markišić, 2016b, a, 65–67), due to different weather conditions, such as higher sea level altitude compared to Kosovo, roofs with a steeper angle were used. This was done to make it easier for the snow to slide off the roof naturally.








Increasing the angle of the roof made it more challenging to cover it with stone slabs, but easier to use

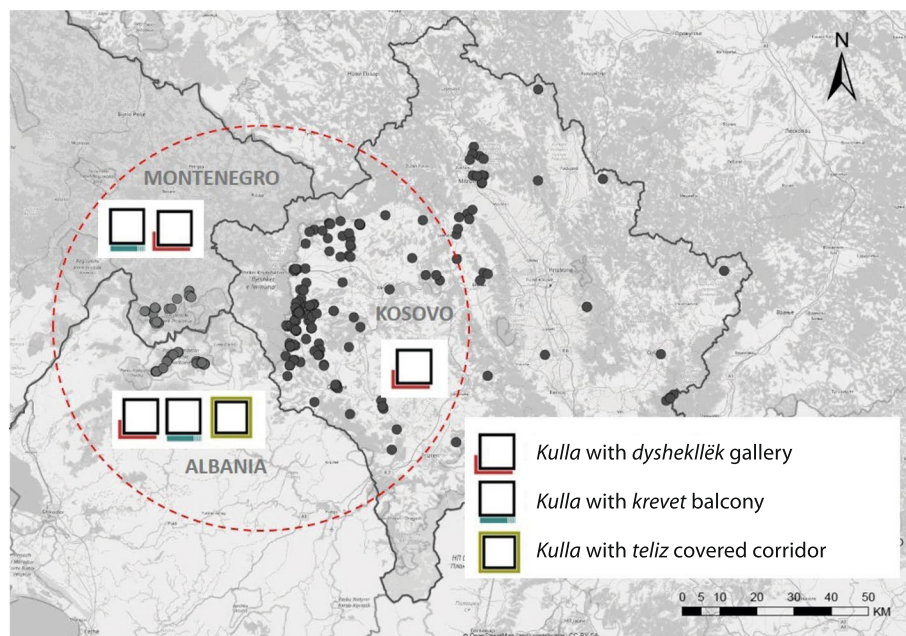


**Fig. 19.** Top and middle: sections (Alpine roof) of the *kulla* of Selimaj Family in Valbona. Bottom: roof cover with timber boards (*furde*) of a *kulla* in Llom, Valbona, Albania, 2021 (Source: the authors)



**Table 4** The proposed joint typology of Albanian *kulla* in the Balkans

	Location	Architectural element	Building materials and technique	
			According to age	According to roof construction
<b>TYPE 1</b>  <i>Kulla with a dyshekllek gallery</i>	Common for Kosovo, Albania, and Montenegro  The most widespread type in the region	Includes all distinctive sub-types, according to the position/extension on the facade	Timber <i>dyshekllek</i> gallery (18th century)	Hipped roof, covered with hollow roof tiles 
			Stone <i>dyshekllek</i> gallery (19th century)	Alpine roof, covered with timber boards <i>furde</i> 
		Includes also variations of galleries, perceived as distinctive types only based on their local language names	Sub-type: 1a <i>kulla</i> with <i>çikma</i>	Hipped roof, covered with hollow roof tiles 
			Sub-type: 1b <i>Kulla</i> with <i>qoshk</i>	Hipped roof, covered with hollow roof tiles 
<b>TYPE 2</b>  <i>Kulla with a krevet balcony</i>	Common for Albania and Montenegro  A widespread type		Timber <i>krevet</i> balcony	Hipped roof, covered with hollow roof tiles 
				Alpine roof, covered with timber boards <i>furde</i> 
<b>TYPE 3</b>  <i>Kulla with a teliz-covered corridor</i>	Typical to Albania. Very rare examples have been retained, thus categorised separately		Timber <i>teliz</i> -covered corridor	



**Fig. 20** The distribution of *kulla* houses based on the proposed typology

timber planks such as *shiklla* or *furde*, which were commonly made from the ‘red’ heart of the black rock pine in Albania (see Fig. 19) and Montenegro. In the Dukagjini region, people used only the tree’s heart, which has more resin and a longer lifespan, to make important elements like beams, while the other layers of the trunk were reserved for less essential items such as furniture. The *furde* were thick timber planks, approximately 1 m long and 30–40 cm wide, and cut only with an axe (GO2 Albania 2021). In the areas of Plavë and Guci, roofs with a minimum angle of 45° were necessary due to climate conditions (Markišić, 2016b, a, 65–67). This also applies to *kulla* in North Albania.

In summary, *kulla* houses across the three regions were erected using similar construction materials and techniques; the primary distinction lies in the variation of roof shapes and coverings. In the mountainous terrains of Albania and Montenegro, the roofs were constructed with Alpine coverings made of timber boards designed to facilitate the easier descent of snow. Conversely, in Kosovo, where the weather conditions are comparatively less severe, roofs featured less pronounced slopes and were adorned with hollow adobe roof tiles. The divergence in materials and techniques employed in constructing *kulla* can be attributed to the unique contextual conditions of their respective locations and the availability of indigenous building materials.

### 3 Discussion and conclusion

Based on the comparative analysis, the common characteristics and differences of the rural *kulla* stone houses in regions inhabited by Albanians in Kosovo, Albania, and Montenegro can be identified as follows:

First, the functional composition of Albanian *kulla* remains consistent regardless of where it is located. Typically, the ground level is designated as a barn, the first level is reserved for family living spaces, and the highest level serves as the *oda e burrave*.

Second, regardless of whether it is at the neighbourhood level or in terms of the arrangement and composition of the yard, the *kulla* setting reflects the rural lifestyle of Albanian families. The only noticeable difference is the type of fence used to enclose the yard, which can be either stone walls or palisades. However, this difference is not significant enough to justify the typological categorisation.

Third, the construction technique and materials used for Albanian *kulla* are uniform throughout the region. These cubic-shaped stone houses have a distinctive top floor known as the *oda e burrave*, which features a protruding architectural element in the facade called *dyshekllek* that is designed with great attention to style. Two general categories of *kulla* emerge based on the construction technique and material used for the construction of (a) *dyshekllek* gallery and (b) roof:

(a) *Dyshekllek gallery* varies depending on the age of the building. The older *kulla* built in the 18th century typically has a wooden gallery, while the newer one from the 19th century has a stone gallery. This distinction is already established for *kulla* with *dyshekllek* galleries.

(b) *Kulla's roof* varies depending on the altitude and geographic location. *Kulla* houses with hipped roofs covered with hollow roof tiles are found in some areas, while *kulla* houses with Alpine roofs covered with timber boards known as *furde* are found in others.

Since the protruding architectural element in the facade is the most distinct element, we propose to divide *kulla* houses in the cross-border region into three types (see Table 4, Fig. 20):

Type 1: *Kulla* with a *dyshekllek* gallery, common for Kosovo, Albania, and Montenegro; the most widespread type in the region.

Type 2: *Kulla* with a *krevet* balcony, common for Albania and Montenegro. *Krevet* gallery is also found in Kosovo, but only in traditional houses, not *kulla*.

Type 3: *Kulla* with a *teliz*-covered corridor, typical of Albania. Scarce examples have been retained and thus categorised separately.

This categorisation enables the recognition of similarities and differences between the *kulla* houses in a cross-border landscape, providing insight into their historical, architectural, cultural, and social values. This knowledge is valuable for the protection, restoration, and adaptive reuse of the *kulla* and their future regional development.

#### Abbreviations

MCYS	Ministry of Culture, Youth and Sport
NGO	Non-governmental Organisation
UNESCO	United Nations Educational, Scientific and Cultural Organisation

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