Flooded Settlements in the Italian Mountains as Consequence of the Construction of Dams – Case Studies and their Relationship with Vernacular Architecture

Irene Ruiz Bazán – Chiara L. M. Occelli

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# Vernacular Architecture as Frame of Life in Historic and Ancient Communities

## Proceedings of the International Conference Held in Berlin in April 4 to 7 2019

BERNADETA SCHÄFER, HERMANN SCHLIMME, and FATMA KESHK (eds.)

SDAIK 39 – 2023

This volume presents a selection of the papers presented at the international conference "Vernacular Architecture as Frame of Life in Historic and Ancient Societies", held in Berlin in 2019 as part of the DFG-project „Nubian Architecture". Researchers and experts from all over the world presented and discussed case studies of vernacular architecture from different periods and cultures, with a special focus on Nubia.

The academic and artistic examination of vernacular architecture has a long tradition. European vernacular architecture first gained widespread interest during the Romantic period of the 19th century, when it was (mis)understood as the preserver of the „national soul". Early modernists drew inspiration from vernacular architecture in the Mediterranean. In post-war modernism, the respective domestic vernacular architecture was stigmatised by historically oriented research and musealisation as being bound to the past and backwardness. Since the publications of Bernard Rudofsky and Hassan Fathy at the latest, however, its appreciation as part of the material culture of humanity has been steadily growing.

Today more than ever, the aspects of sustainability are coming into focus, and the guiding principles of vernacular architecture can be ground breaking for the necessary turnaround in building practices.

# VERNACULAR ARCHITECTURE AS FRAME OF LIFE IN HISTORIC AND ANCIENT COMMUNITIES

## PROCEEDINGS OF THE INTERNATIONAL CONFERENCE HELD IN BERLIN IN APRIL 4 to 7 2019

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# Vernacular Architecture as Frame of Life in Historic and Ancient Communities

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edited by
Bernadeta Schäfer, Hermann Schlimme, and Fatma Keshk

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Cover photo: View of the hamlet of Bijje on the island of Bijje
Photo M. Kačičnik 2015, © TU Berlin/DAI Cairo

The conference was organized in the framework of the DFG-financed project „Nubian Architecture"

*In memory of Hermann Schlimme*
*(1969-2023)*

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# The Topicality of Vernacular Architecture
## Preface

*By Hermann Schlimme*

The present publication is a compilation of papers from the international conference "Vernacular Architecture as Frame of Life in Historic and Ancient Societies", held in Berlin from 4 to 7 April 2019. The conference took place within the wider context of the project "Nubian Architecture: Documentation and Investigation on the Example of the Villages on the Bigge Island", which is conducted jointly by the Chair of History of Architecture and Urban Planning of the Technische Universität Berlin (scientific direction: Bernadeta Schäfer; persons responsible: Johannes Cramer and the present author) and by the German Archaeological Institute (DAI) in Cairo (person responsible: Stephan Seidlmayer). The project, financed by the German Research Foundation (DFG), studies vernacular villages on the island of Bigge in all their different aspects. It is based on an architectural analysis of space, function and construction and on anthropological studies of daily life and social structures, all set in their historical and environmental context. The aim of the 2019 conference, which was conceived and organized by Bernadeta Schäfer and Olga Zenker (both of the TU Berlin) and Fatma Kehsk (of the DAI), was to further establish the project "Nubian Architecture" within a wider field of investigation and to disseminate the research results. The conference also aimed to set the project in the context of a new display of interest in vernacular architecture as part of the current global architectural discourse.

Vernacular architecture is a topical theme. It can be seen as the basis for a sustainable and climate-conscious approach to construction. "Vernacular" means that a settlement draws on local conditions, on the prevailing climate of the site, the available building materials and traditional constructional methods. It can serve to make present-day architecture — indeed, the entire building sector — more sustainable and more responsible in its use of resources. For generations, vernacular settlements all over the world have been repeatedly modified, reused and adapted to the changing needs of the inhabitants. Alterations and refurbishment work were usually carried out by the residents themselves. Vernacular developments, therefore, seem to be characterized by a perfect correspondence between spatial and social structures. In constructing buildings and settlements of this kind, it is not necessary to focus on a scientifically founded history of architecture and theories related to forms and proportions. As a rule, vernacular settlements were and are erected without the input of architects trained academically in accordance with Western models — a fact that says nothing about the quality of the buildings, however.

Many ideas underlying the current architectural discourse on sustainability are based on the principles of vernacular developments. Microinterventions in a given urban environment adopt the small-scale, ongoing adaptations characteristic of vernacular settlements. The reuse of historical, local and renewable materials like clay, or the renaissance of wood, even for the load-bearing structures of larger buildings (e.g. CREE by Rhomberg; Katerra/DMD Modular), also reflect vernacular forms of construction, which typically rely on renewable, locally available materials. Generating knowledge and prototypes for the built environment in a post-fossil society is a major topic in the current global discourse on architecture. University chairs like the Natural Building Lab (Institute for Architecture, TU Berlin, https://www.nbl.berlin/ – site visited 21 March 2022) as well as many architects are convinced that climate-adapted construction systems using natural, renewable resources facilitate a future-oriented, holistic building culture in the interests of the common good. This approach shares its principles with historical, centuries-old, vernacular building traditions – a link that became evident when the head of the Natural Building Lab, Eike Roswag-Klinge, chaired a session at the Berlin conference.

Design-build is another modern concept that has principles in common with vernacular settlements. The term Design-build describes a process, in which the creation of a building, from its design to its

execution, is in a single hand. Design-build enhances the social and identity-creating dimensions of holistic construction and tends to reverse the long-standing division of labour between design and execution in the building process. In Renaissance Italy, the figure of the architect had re-emerged on the basis of the *disegno* concept, which describes the process of building design and its drawn representation as an intellectual act distinct from the implementation of a structure. This division is overcome in Design-build, which plays a key role in the profile of the Institute for Architecture at the TU Berlin. It involves the chairs CODE (Ralf Pasel-Krautheim), Architectural Design and Building Construction (Jacob van Rijs, individual projects) and, once again, the Natural Building Lab (Eike Roswag-Klinge).

This interest in vernacular architecture is not a recent phenomenon, however. Vernacular architecture provided a model for architecture throughout the 20th century. From the 1950s to the 1980s, however, vernacular models — often derived from the Mediterranean — were removed from their original contexts and employed in different climates and societies. Modern materials were used, and slow growth was simulated by applying structuralist approaches or formalized user-participation processes. Vernacular models were even extended to the huge scale of megastructures. Today, one finds a different approach to vernacular architecture. Not only historians see it in its respective local and historical context. Design architects, too, analysing the whole social and cultural context of vernacular settlements all over the world, see the existence of vernacular housing as a starting point for sustainable urban development strategies. The aim is the continued inhabitation of vernacular settlements. This may be referred to as "cultural sustainability", which can be achieved by sensibilizing people to the value of their local built heritage. A blind process of modernization that alienates people from their habitat should be avoided. The "belief in the need to overcome traditional trajectories of knowledge production and transfer, disciplinary fragmentation and persisting knowledge hierarchies" is a guiding principle of the Habitat Unit, Chair of International Urbanism and Design, headed by Elke Beyer, Anke Hagemann and Philipp Misselwitz (Institute for Architecture, TU Berlin, http://habitat-unit.de/ – site visited 21 March 2022). The Habitat Unit is involved in many projects in sub-Saharan Africa and South-East Asia. A stakeholder- and development-oriented approach bestows an important role on the local context. A session at the conference was chaired by Philipp Misselwitz. Architectural and urban design on the one hand and historical and heritage studies on the other work together to ensure the continued habitation of vernacular settlements. The historical aspect is important in maintaining the value of these developments and in protecting them as manifestations of human knowledge in the realm of social and constructional sustainability.

The papers compiled in the present volume are specifically concerned with Nubian architecture, but they have a broader context, too. They cover examples from Mali to Iran, from the northern Mediterranean to the Sudan. They assume different points of view and deal with material and immaterial traditions, ranging from art and everyday tools to language and other expressions of culture. The papers extend from historical research and matters of heritage to the relationship between vernacular and 20th-century architecture. Thanks are due to all speakers, to all chairs of sessions and to all those who participated in the 2019 Berlin conference for their contributions to the intensive discussions, which in many cases have enriched the papers in the present volume. Thanks also go to the German Archaeological Institute for the scope it provided to publish the proceedings in its well-established open-access digital series, and to the German Research Foundation (DFG) for the project funding, without which this publication would not have seen the light of day.

The present volume is a contribution to the topicality of vernacular architecture from the perspective of history and heritage preservation. It also seeks to share specific approaches and findings with the current and more general architectural discourse on sustainability, climate change and bottom-up approaches. Discussion of these topics is now increasing in intensity and will witness many more contributions from all sides. The forum is open.

Berlin, March 2022

# Flooded Settlements in the Italian Mountains as Consequence of the Construction of Dams
## Case Studies and their Relationship with Vernacular Architecture

*By Irene Ruiz Bazán and Chiara Lucia Maria Occelli*


## Abstract

This work is part of an international research with a principal aim to study and understand the processes related to heritage caused by the massive construction of dams and reservoirs during the central decades of the past century in Spain and Italy. We studied the repercussions, not only from a building restoration perspective, but also associated fields - such as memory, politics, geography, sociology or anthropology - in order to manage all the "reactions" that engage the topic of collective memory. Furthermore, the study constitutes an opportunity to build new concepts with which to analyse (and design) contemporary fields of study for the improvement of strategies for the conservation of the values of villages in areas with high seismic risk or hydro-geological instability.
We present different examples of flooding processes that are significant in understanding the complexity of these operations acted in a different way, one with a negotiated reconstruction, the other one with demands on the part of the inhabitants that made the operation infeasible or the most extreme case, the last one without reconstruction of the village.



## Keywords

Reconstruction, Vernacular architecture, Submerged settlements, Memory


## Introduction

In this article, we present research that is part of an international project involving investigations in both Spain and Italy. Its overarching objective is to comprehensively examine a situation common to both countries: villages and settlements that were submerged as a consequence of water reservoir construction designed to produce electricity and those that were later abandoned (i.e. left as relics) after submersion of whole valleys, as a means of promoting agriculture. These operations, undertaken primarily between the late 1920s and the 1960s, caused a great number of residences in mountainous areas to be flooded. Many villages disappeared completely underwater – an event that led to the construction of new population centres. The citizens who were forced to leave, however, remained linked to the villages that are now empty or consolidated as ruins. Many of these populations periodically return to maintain traditions or rites. The same occurs for families whose villages had been submerged: they come back when the increasingly frequent periods of drought expose their homes. All these phenomena inform us about the relationship between dwelling and the need to return to one's former home(s) and give rise to the following central question: to what extent are physical dwellings related to a culture's social, political, and architectural vernacular and how it is possible to maintain this link when it is physically ruptured?

This reflection, in our regard, can help reconstruction projects identify and further delineate the roots of areas destroyed as the result of war or natural disasters (e.g. earthquakes). As an example, it is possible to examine an analogous kind of disaster – in this case programmed, such as the construction of dams. It is a situation that typically precludes return

ever to 'that' soil. However, as we have seen, people have endeavoured to maintain a link through various means in order of relieve the trauma of that loss.
One of the main problems of displacement – whether by intent or happenstance – has always been to find a proper place to relocate the affected populations. Historically, there has been conflict amongst the parties involved (most often the inhabitants of the drowned villages and the authorities). It is important to analyse the arguments of each stakeholder in order to understand the significance of both the translocations and village reconstruction in defining the memory of an entire community.

We present three case studies: the first one is the translocation of the Village of Zuri in Sardinia carried out by Carlo Aru in 1922 and subsequent reconstruction of the entire village and the translocation of the church of San Pietro in the course of the reconstruction, the second is of the planned flooding of Cantalupo Ligure in the early 1930s which ultimately was not flooded due to citizens' protest and the low income expected in terms of monetary gain for the company; and the third is the submersion of the Walser Village of Agaro in the mid-1930s.

## Case 1. The Translocation of Zuri (Sardinia, Italy)

The case of Zuri represents one of the first known processes of translocation of an entire monument in Europe, the medieval church of San Pietro, due to construction of a dam. Fortunately, a lot of documentation about the disassembly and reassembly of the monument is preserved, unfortunately we have less information about the architecture of the former village.

The modestly-inhabited area of Zuri, with about 200 residents in 1923, was located in the province of Oristano (in the proximity of the Tirso River at an altitude between 85 and 105 meters above sea level). The hydroelectric company, Società Imprese Idrauliche ed Elettriche del Tirso, promoted construction of the dam of Santa Chiara. The planned reservoir at full would reach the altitude of 109 meters above sea level. In order to avoid the inhabited area of Zuri nor to submerge its church of San Pietro, it would have been necessary to reduce the height of the dam by 21 meters. This would consequently have reduced the capacity of the basin and the consequent benefits by more than half[1]. These benefits overrode the concerns for the inhabitants of Zuri: their efforts to save their village were not successful.

The concession regulations for dam[2] construction established that the village of Zuri should be reconstructed at the expense of the concessionaire, the hydroelectric company, after consultation with the local governmental authorities, in a suitable location on a higher altitude than the lake.

The hydroelectric company prospected two possible solutions to the inhabitants: aggregating to a neighbouring municipality or choosing a new place that would host the new village, 'Zuri Nuova'. This second solution provided two possible locations: one was the village of Fenughera included in the territory of Zuri, nearer to the existing village, in the same slope, and the other one was the locality called Murreddu, which is part of the municipality of Soddì and part of that of Boroneddu.

On July 1920 there was a municipal council for choice the locality for the reconstruction. Through the vote, it was possible to express the preference for the two sites indicated for the new location of the village.

The voters expressed, with a majority equal to 40 votes against 11, their own preference for the site of Murreddu, therefore the SIEE purchased land in that locality, to reconstruct the village and move the church. The houses were expected to be healthier and more hygienic that the existing ones, and the hydroelectric company should also provide at its own expense and with its own means, the transport of all the furniture, agricultural implements and household goods to the new houses.

The translocated church of San Pietro, and its location, represented a key point in the planning of the new village. Despite the initial ideas of placing the church in the city centre, in the square generated by the eight radial streets that compose the new planning of the city, C. Aru, the superintendent in charge of its transfer decided to rebuilt the church along the border of the new village, with the façade perpendicular to the axis of one of the mayor streets.

This was for, in words of Aru, not to sacrifice the view of the church among the narrow circle of the ordinary houses[3].

To potentiate the views of the monument as one of the main criteria for the reconstruction of the church is in line with the ideas that would have been reflected in the later Charter of Athens:

1 Deriu/Chessa, 2015.
2 Ibidem.
3 Aru 1926.

Fig. 1 Views from the centre of the new Zuri (Photos © I. Ruiz Bazán/Ch. Occelli)

'The Conference recommends that, in the construction of buildings, the character and external aspect of the cities in which they are to be erected should be respected, especially in the neighbourhood of ancient monuments, where the surroundings should be given special consideration. Even certain groupings and certain particularly picturesque perspective treatment should be preserved'[4].

The houses of Zuri were one-story built in stone, with curved ceramic tile roof. The openings of some houses appeared whitewashed with lime, according to Sardinian tradition.

In November 1922 the mayor of Zuri had written a letter to the prefect of Oristano where he reported that engineer Paolo Carta had been visiting his town for some time and was carrying out reconstruction work on new houses. The mayor had turned to the prefect because the company had not respected the specific clauses set out in the compromises such as: the completion of all the houses with the walls of the courtyards that served as a building on the other, the construction of the canopies; the arrangement of the internal roads and access to the neighbouring municipalities of Soddi and Boroneddu, the construction of the rolling road that led from the remaining old town of Zuri to the new, the construction of the Municipal House and the Granatic Mount, the transport of the church of San Pietro and to finish the construction of the municipal cemetery and the annexed chapel dedicated to Saint Barbara.

According to an inspection carried out in August of the same year, the inhabited area of the old Zuri was made up of 280 rooms, 1229m2 of canopies and 2854 m2 of farmland intended for horticultural crops. The surface of the houses the electric company were building was smaller than the one that would have been submerged, so in order for the new village to have the same surface as the old one,

4 Athens Charter, 1931.

they would have to build precisely 306 houses. The cost of rebuilding each house was 4150 lire.

Therefore, the contracts to build the remaining houses were stipulated. All these series of numbers and specific accounts that reduced the homes to simple quantities of square meters, give us the idea of the little importance that in these processes was given to the immaterial value of these places.

As far as the way of living is concerned, the company undertook to supply electricity to each household, to make one or more lamps of the total consumption of thirty watts work. This supply would have been granted free of charge for ten years and would have ceased before the ten years in the event of the owners' death, lease or sale of the building. Each individual transferee and his cohabitants were granted the right to fish in the new artificial lake, a right to which they could renounce by receiving a payment of 500 lire. The society that managed the dam, after five years would have been able to redeem the fishing rights granted by paying the sum of 1000 lire.

Although the fact of being forcibly transferred from their place of origin does not cease to imply a rupture with the links and roots of the place, we can consider that the case of Zuri was somewhat agreed as the inhabitants were given the opportunity to negotiate with the hydroelectric company the conditions of its transfer.

The reconstructed houses have in a way a similar external aspect to the pre-existing ones, they are one or two-story buildings with the same type of roof, stone facade and the entrance door and a vine plant to the street. The mutual relation of the houses resembles that of the ancient village and the presence of the vine plant that surrounds the entrance door is a clear reminder of the ancient houses. Another important aspect in the reconstruction of the village is the relationship with the monumental church that was reassembled in a pre-eminent position, clearly visible from the centre of the village and from many of the houses facing the central axis.

## Case 2. Rocchetta Ligure, Albera Ligure and Cantalupo Ligure (Liguria, Italy)

We have to shortly mention the project of the early thirties of the twentieth century for flooding Rocchetta Ligure (898 inhabitants) Albera Ligure (846 inhabitants) and Cantalupo Ligure (1315 inhabitants) as well as their different fractions: Pertuso, Colonne, Arborelle, Besante, Carraro, Strappesese, S. Nazzaro, Pagliaro inferiore, Astrata, S. Martino and Spinola, whose flooding project is conserved in the Enel Archive in Naples[5]. Even if this dam was not built, and therefore people were not relocated, the documentation collected in the archive allows us to go through the entire process of reconstruction planning and shows us how the flooding of Zuri was considered at that time a model of reconstruction.

The preliminary project, conceived for the hydroelectric company Società Elettrica Interregionale Cisalpina, was overseen by the engineer, Alberto Bordini (budget specialist and professor of *Estimo* at the Polytechnic of Turin), and approved in Chiavenna (Sondrio, Lombardy) on December 20, 1931. In his proposal, Bordini explained the so-called 'animus' that might follow the expropriation process and the difficulties it could be expected to incur. This document has a marked economic nature, elaborating how one could optimise the cost of constructing the new villages. This is probably caused by the preliminary calculations for the construction of the dam, which already anticipated that the project would not generate sufficient electric revenue to offset its cost (indicating it would not be economically viable over the long term).

Regarding the style of the architecture proposed for the reconstruction (designed at scale 1:100), we can appreciate various typologies of rural houses and service buildings as well as their location within the planned broader urban context. This kind of document constitutes a first-order source for understanding the conception of housing development and habitability conditions during that period, as well as the social needs of its various communities. But they also expose the flat and impersonal conception of their design: merely functional and without any relation to the pre-existing architecture that, theoretically, was about to disappear. There were also designs for constructing hotels, schools, and cemeteries – all identical – following the models.

We also have the plans for construction of the various urban centres, without date or signature, at 1:100 scale of the three types of houses, hotel, school, and cemetery, as well as the general plan of each. These, following the master plan of Zuri and designed in 1:500 scale, bear no relation to the previous layout of the inhabited nucleus, drawn at a 1:1000 scale. The new master plan is coded with

[5] Occelli/Ruiz Bazán 2019.

Fig. 2 Typical Walser Houses in Riale, next to Agaro (Photo © I. Ruiz Bazán/Ch. Occelli)

three different colours (red, green, and blue) that represent, respectively: buildings, roads, and void spaces.

In the documentation found, there is also a survey of the buildings to be expropriated. This provides important data on the state of conservation and features within the properties of these centres, allowing to obtain a 'photograph' of the living conditions in the mountain villages during these years.

As we have previously anticipated, the low economic return to be derived from this operation - particularly considering the significant cost that expropriations would have entailed - led to its not ultimately being realised. The fact that it is the only complete file kept in the Enel Historical Archive (which gathers practically all the documentation produced by the hydroelectric companies until the 1960s) makes us think that the submersion processes, when carried out, were silenced in some way.

## Case 3. Agaro (Verbania-Cusio-Ossola, Italy)

The Walsers (a contraction of the German *Walliser* that is the Valais, who lives in the canton of Valais) are a population of German origin living in the Alpine regions around the Monte Rosa massif. During the 12th-13th century, Walser settlers from the upper Valais settled in various locations in the Alpine arc in Italy, Switzerland, Liechtenstein and Austria. The Walser community of Agaro came from the upper valley of the Binn and was established in the valley of the Devero in the second half of the eighties of the thirteenth century.

The only source of income was given by dairy production and life was regulated according to the times of transhumance, marked by the seasons and religious holidays. The spring and the autumn, the intermediate seasons, were spent in the plain of Agaro; the summer reached the highest pastures while in the winter due to the snows, remaining in the valley became too dangerous and most of the population transferred from the end of December to March in the lower centres.

As a result of the process of electrifications of the Alps, in 1930 was announced the plan to flood the village of Agaro and its pasture land. In those years, the concessionary company of several hydroelectric plants throughout the Val d'Ossola was the Società per Imprese Elettriche Conti which, in 1907, had also obtained approval for the construction of the Goglio plant and for the exploitation of the waters of the Devero torrent, collected upstream in the Codelago Basin. Twenty years later, as the nation's energy needs changed, despite the numerous reservoirs built throughout the Toce Basin, the plant system was still characterised by a strong availability of summer energy compared to the winter's one. To overcome the lack of winter energy, the Edison Company therefore decided to construct the Agaro Dam.

The houses of the inhabitants of Agaro were valued in less than half a million lire. The protests and the evidence that they should abandon their home and their livelihood would have been destroyed didn't had any importance to all the authorities they appealed to, nor of course for the hydroelectric company.

The hydroelectric company never considered the reconstruction of the village, but the economic compensation to the expropriated. It was said that the dimensions of the dam once it had been completed would no longer have room for reconstructing a new village nearby.

It seemed probably that the Agaro people deprived by the construction of the artificial lake not only of their houses but also of their only source of subsistence, the pastureland, would be ruined in a short time, after having spent the allowances received. But no actions were taken into consideration by the government.

The Edison company due to its long experience of expropriations did not need to resort to strong manners with a small group of mountain dwellers: it knew more finely and effectively ways than the direct confrontation. After five years of resistance of the Agaro people and lengthy negotiations, on October 13, 1935, the head of the Edison office of Baceno told them the electrical company had rented for fifteen years all the communal pastures of the former territories of Agaro. Thus, eliminating the possibility of subsistence, the inhabitants of Agaro ultimately had to give up their pretensions to remain in the land of their ancestors[6].

Still, Agaro people did not really believe that their village would be destroyed. An iconic photograph shows some of the last diehards departing from their flooded house on a boat, leaving everything behind. The families were dispersed in various localities all over the valley.

The houses that disappeared, partially visible when the lake is dried for maintenance were examples of the typical Walser architecture. Normally arranged on three floors they show generally a dry-laid stone base, and an overlying part in timber, diversified according to use. The gabled roof consists of slabs of local stone, whose considerable weight is supported in a masterly manner by the structure of the roof beams. There are also eaves, made from half-cut trunks of larch.

Regarding the conservation of some 'architectural parts' of the disappeared village of Agaro, the old inhabitants of the submerged Walser town; when in 1995 the lake dried up, recovered two columns of the old chapel of Agaro using a helicopter. Finally, the columns were repositioned in the church of Ausone, near to its original location. Additionally, the bell of the church is now located in the small church of Saint Apollonia built in 1968 in the locality of Alpe Devero.

Although their place of origin is under water, the descendants of the inhabitants of Agaro continue to meet annually in the church of Santa Apolonia, and continue to maintain a strong bond within the members of the ancient community trying to recover their memory and performing different local initiatives to remember their history.

## Conclusions

As the construction of dams is often located in mountainous regions, the people affected by this artificial flooding were people who historically came to the mountains and accepted the harsh living conditions that this entails. When the flood happens, they spring back, abandon their land for the benefit of that which Piero Bevilacqua and Manlio Rossi Doria defined the 'pulp' of Italy: the plains and the most developed and prosperous agricultural areas. This 'pulp' was complimented with the 'bonhat e', the mountain and the interior areas of Italy characterised by sparsely populated or depopulated lands, a dispersed demographic structure, small urban centres built over infertile and rugged soils, and a lack of communication routes and connections with the cities. They constitute a remote geography of poverty in a world in which the development of capitalism and the processes of modernisation were transforming the rest of the territory with a speed

[6] Zucca 2000.

never experienced.

The difficult way of living in the mountainous areas due to its harsh weather conditions had given rise to a series of vernacular architectures, whose particular interest resided in the relationship established with the environment. Its disappearance what constitutes an unfortunate loss not only for its patrimonial value but also for the lessons on the dwelling that its construction teaches us.

As we have seen in the case studies presented, it seems pretty clear that in the cases of submerged villages, authorities always directed their efforts to the conservation of architectures of monumental value. This fact lead to the disappearance of many examples of vernacular architecture, as it is the case of the Walser houses that were no considered of any value at that time.

However, the true history of the inhabitants of these places draws our attention to notice that even small pieces of their houses such as doors or windows had a special identity value, and they were relocated in the new, anonymous houses.

These two confronted situations; on the one hand the null attention of the authorities to vernacular architecture, and on the other, the salvation by the inhabitants of some elements almost as if they were relics, reveals an interesting point regarding the consideration of the value of vernacular architecture. Not only because of the lessons it teaches about sustainable construction, but because of the value that this 'architecture without architects' has for its inhabitants. As we have seen, in its elements, there is a material link with the past and the history of a people, important enough to 'save' it from the flood. Visiting these places, and talking to the heirs of the transferred populations, as in the case of Agaro and the transferred population to the villages next to the valley, allows us to verify how in many cases, windows, wooden beams or simply some stones used for the basement are indicated as extremely important elements belonging to their old houses, elements that maintain the link with their ancient disappeared villages.

This facts prove that vernacular architecture had a very important identity value which in many cases goes beyond the importance people give to their monumental heritage.

Studying the history of submersion and reconstruction processes, even when they have not been produced as is the case of Roccheta, Albera and Cantalupo, allows us to understand the perspective from which these operations were carried out by hydroelectric companies, with the consent of the government.

On the other hand, we can check how - according to the type of reconstruction process - the operation, within the trauma, was more or less positive, also, in relation to the maintenance of the housing typologies and characterising elements and their relationship with the place of origin, as is the case of Zuri as opposed to that of Agaro.

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