

Actions for sustainable development: A strategy for rural growth in Dropull municipality aiming the improvement of the rural architecture through the promotion of local available resources

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Laia Gemma García Fernández
PhD researcher / Ferrara University

Abstract

The rapid depopulation that is emptying the rural areas around Europe is a common problem that also affects Albania: countryside areas in Albania are facing serious social and economic changes due to the abandonment and decay of the smaller town centres, where the age of inhabitants is unstopably growing due to the centralization of the industries and production services in bigger urbanized areas. The lack of infrastructures and facilities for the community as well as for potential tourists, brings about the necessity of re-thinking how to design a rural development model that satisfies the social, economic and environmental sustainability for the development of rural areas. The overview of villages in Dropull municipality shows how depopulation has given rise to the degradation of vernacular architecture and therefore, the decline of the construction and the local businesses related to building materials. This has led the Albanian government to launch the initiative "100+ village academy", whose main objective is to design tailor-made development models for rural areas, based on tourism potential. Therefore, finding strategies to promote the gradual reactivation of buildings, public infrastructures, community services, monuments and tourism attractions seems to be key to succeed in the development of rural areas in Dropull municipality.

Acknowledging the great contribution that rural and vernacular architecture can give to the development of the area, this work aims to understand the building typologies, uses and techniques, as well as the urban fabric of the Dropull villages, with a focus on Jorgucat. In addition, the current situation of the built environment will be applied to specific building contexts, with the intention not only to build sustainable infrastructure but also promote the economy of the community by the reactivation of rural tourism and businesses. The design and construction as a trigger in the development process of a rural village becomes a key moment to foster the economy, the environment and the sense of belonging to a community.

Introduction

There is no doubt that the current crisis that rural areas are facing is an important issue that our policymakers have to tackle in order to find solutions for the development of those areas. In fact, in Dropull Municipality, several researches have been carried out to quantify how depopulation is affecting the development of the area. During the last 15 years, the population has decreased 60%, and by January 2016 the number of inhabitants was evaluated in 7200, with only a 4% of young people between 0 and 14 years old (ISTAT, Bashkise Dropull Strategjia Territoriale 2015). Due to this massive

migration process, urban centres are growing more and more, receiving thousands of people coming from rural settlements in search of a better quality of life, while in the rural areas businesses are financially depending by remittances of migrants spread all over Europe. In developing countries like Albania, the driving force of the economy is represented by the construction sector, and specifically, in Dropull municipality it contributes to the local economy by 14% (ISTAT, regional accounts, 2015). This means a dynamic building activity, but its consequence is poor planning.

The crisis of rural Dropull affects directly

the built environment and the urban planning of those areas. These effects are translated on abandoned buildings, few infrastructures, poor planning and lack of long-term development strategies.

Most of the vernacular architecture found in rural Dropull are domestic buildings and family houses. Domestic architectures differ depending on the moment they were built. It is very common to still find vernacular houses made out of stone, with big arches in the entrance and with the well-known technique of flat stones roof. Domestic houses have a front open space used for gardening or to give shadow to the building, especially with vines. The use of local materials to build has been very common in rural areas. Benefiting from the resources that could be found in the surrounding environment represents the genius loci of the place (Zaffagnini, T., 1995). Buildings were used not only for the families, but also as a shelter for the cattle and to place agricultural tools in the ground floor. Despite the valuable use of the local knowledge to build, nowadays the influence of urban areas has led to the use of concrete structures, steel and corrugated sheets as part of the modern techniques now applied in rural areas. As a result of this situation, we find a landscape made up of 'informal' architecture that adopts different architectural styles and techniques. While in the past urban houses evolved from the rural houses, as several studies have demonstrated, now the features of urban constructions are being copied in rural areas, resulting in what we know as new vernacular architecture (Pashako, F., 2012).

State of the art

Vernacular architecture in Albania

The architecture of Albania has been greatly influenced by its location in the Mediterranean Sea, as it has been inhabited by numerous civilisations that have led to a very rich cultural heritage, shaping the building styles as well as techniques over the centuries.

The vernacular architecture in Albania plays an important role in the cultural heritage of the country, due to the great expansion that it has on the whole country. While there are significant examples of religious buildings, castles, as well as some commercial buildings and public infrastructures, the most widely spread typology of vernacular architecture is the domestic building or dwelling. Domestic constructions are "characterised by the development of planning and construction models able to make the most of the climatic conditions of the area, with the development of unwritten rules that are extremely effective regarding the orientation, the distribution of the rooms, and the natural hygrothermal control of the constructions" (Di Giulio, R., Zaffagnini, T., Brunoro, S., Longo, D., and Piaia, E., 2013)

Dwellings started to be built around the 15th century, and under the influence of the ottoman empire having a great impact on the typology features, would continue spreading around the country until the early 19th century (Pashako, F., 2012). In the beginning, the traditional dwelling was called the 'House of fire', as the functions of the house were positioned around a fireplace, being usually a two-floor house.



Fig.1 / Typical entrance of stone house in Jorgucat. Source / the author



Fig.2 / Health centre entrance in Jorgucat. Source / the author

The firehouse soon developed its main character adding sometimes a porch or a backyard to increase the relationship with the natural environment. This is a character that we still often see in traditional houses in rural areas, and the idea of using the ground floor for agricultural activities is still very common. Further developments of the dwelling included a balcony on top to receive guests. In some other types of dwellings, as defensive constructions, there were several floors in order to have a predominant view of the territory to protect themselves against attack. The rural landscape in the Albanian countryside is therefore influenced by the

traditional dwelling as a building that is itself surrounded by a private-open-space where agricultural activities or green gardens are the most predominant cases. This leads to low-density constructions and larger use of the land and space compared to urban areas.

The Dropull heterogeneous urban fabric

While there was a slow development during the communist regime due to centralized policies and a long period of isolation (Dollani, A., Lerario, A. And Maiellaro, N., 2016), this contributed to the preservation of vernacular architecture and its building techniques. Nowadays,



Fig.3 / Abandoned building in a local stone workshop. Source / the author



Fig.4 / Local stone workshop in Jorgucat. Source / the author

the desire to express the modernisation as much as possible through different styles and architectural languages has led the gradual loss of vernacular architecture. Therefore, in the Dropull area we can find fragmented and heterogeneous vernacular landscape, where the modern idiom is alternated with the vernacular style of the traditional buildings.

Focusing deeper to define the main characteristics of the two types of constructions that can be found in the area and taking Jorgucat as an example (1200 inhabitants), we find a village that is clearly divided in two areas with different features between them: In the upper part

of the village, the fabric is organic, roads are narrow and the predominant material is stone. The natural boundaries mark the limit of the urbanized area, and the sloped land gives peculiarity to the private plots that are separated by terraces. Each plot has a house, sometimes divided in more than one construction inside the plot, a vegetable garden, a vineyard, and seasonal fruits at the front part of the house, casting shadow during summer and letting light and enabling natural heating during winter months. The traditional material used to build the dwellings is stone, and the main technique to construct the walls is stone masonry, while the roof

structure is normally a timber-frame. For the last layer of the roof, the traditional technique with stone slabs is used. From an aesthetic point of view, these houses have a strong personality, and different characteristics can be found, such as arches in the entrances, colorful timber doors and other decorating items made out of stone or wood.

Analysing the lower part of Jorgucat, new standardized and functionalist buildings have brought a completely different view of the urban fabric, where each owner feels free to build anywhere on the property and in any way. The constructions consist of a single or two-family houses of two or three floors with different architectural styles; a building with architectural qualities is rarely found. The structure of the new vernacular buildings is made out of concrete, with pillars and slabs. The main material used to build the walls is the fired brick. The flat roof is the most commonly used but is also possible to find buildings with a four slopes roof, with ceramic roof tiles.

The crisis of new vernacular architecture

The municipality of Dropull consists of three administrative units, with a total of forty-one villages, of which only one of those (Dervişan) can be considered somehow urban while the rest of the inhabited territory has a significant rural character. According to the census of 2011, the total number of inhabitants in the entire municipality was 8415, while in the 2015 census the population had decreased to 7127 (ISTAT, local elections 2015), which means a loss of 15% of the total population. This data reveals the deep crisis that the area is facing.

When the new trends are not based on a solid foundation of tradition there is the risk of erasing local features and building traditions by replacing them with new contemporary techniques, and thus resulting in places without personality that could be anywhere. Therefore, the conservation of the rural folklore and the building techniques shouldn't get lost. But unfortunately, there are several events and plights which have led to the current situation: Since there is not much invested by the state in supporting agriculture (the main source of income in countryside areas), people have migrated to bigger cities, letting small centres die slowly. Elders cannot face this crisis without the help of the younger. Therefore, the interest in preserving the traditional architecture has been lost, and with it, also the skills needed to restore the old

constructions or build new constructions with local materials. Vernacular techniques like the stone masonry or the typical roof made out with stone slabs require very specialized labor, as well as a high budget due to the specificity of the craft and materials required. As a result, people cannot afford the restoration of their traditional dwellings, which results in unfinished or unrestored buildings all around the municipality. In addition, since the eighties, the incapability and the lack of resources, has given place to the new urban fabric with all the concrete buildings that have completely forgotten the traditional building techniques, depending on external resources and materials. This situation has caused the failure of many local economies, mostly related with the materials and the construction business, and has also led to the loss of the local workforce skills.

But the biggest paradox in this situation appears in relation to its position as a cross-border region with Greece. The neighbors from Greece follow strategic policies toward the preservation of the rural areas, such as the use of local materials and traditional techniques, thus limiting the modification of the built environment and the landscape. Surprisingly, however, the materials and resources used to restore their villages are coming from Albania, specifically from the Dropull municipality. First of all, stones in the quarries on the Greece-side are very hard to work with and therefore are very expensive in comparison with the Albanian stones, which are softer and easier to work with, and equally good for construction. (Interviews with locals, 2019). Moreover, a similar situation happens with wood as a building material. Since in Greece there are very strict policies aiming to protect the forest from deforestation, wood is often bought in Albania and then brought to Greece to be used in traditional timber roofing structures. These facts give a glimpse about the current situation in the municipality of Dropull, where there are no policies aiming for the protection of the environment and the promotion of traditional and local materials as a better solution for building.

Territorial strategy objectives and local actions

The case of Jorgucat is only one examples among the villages where vernacular architecture is disappearing, thus giving place to modern style buildings. This practice should be avoided in order to bring back the interest on this area and promote

sustainable development strategies and the conservation of the building heritage through the use of traditional techniques and building materials. In fact, the Albanian government has launched the initiative 100+ village academy (100+ village academy Initiative, Albanian Government, 2018), to promote models based on the tourism potential villages have.

Territorial strategy

Together with the Dropull municipality and with the support of the national territorial council, POLIS University has conducted research for a territorial strategic plan of the municipality of Dropull (Polis University and Dropull Municipality: Territorial plan, 2018). An action plan for territorial solutions has been developed. Four key strategic objectives have been designed, which aim to be tangible and easily applicable by the Municipality at a territorial level. One of the objectives is the Preservation of the rural character of settlements and the improvement of quality and living conditions, where architecture and construction play an important role. Through specific development policies, the rehabilitation of many areas that are currently abandoned or under critical conditions will be encouraged. The center and main infrastructure of each village must be regenerated in order to improve the lives of its residents and increase the security and quality of the public spaces, thus making all the villages attractive to tourists throughout the year.

Local development actions

To promote the preservation of the rural character and to enhance the living conditions of rural villages, actions that involve construction of buildings are of crucial importance. After having set up a series of territorial development strategies, the next actions have been thought to influence directly on people's life, by taking into account the potential for the revitalization of historical and vernacular buildings. Such actions raise the awareness and community's sense of ownership of the place. These specific actions aim to contribute to the sustainable development of the rural centres based on their tourism potential, and to the understanding of the role architecture and infrastructure in changing and improving the life of the community (Cattaneo, T., Giorgi, E., Ni, M., and Manzoni, G., 2015).

The local actions will be developed in the framework of the next goals:

1. Building and design: The construction of a building is important for the transmission

of the cultural heritage and the traditional building techniques, the enhancement of the history and the local businesses. The design and construction of a building, especially a public one, is key in spreading the knowledge about environmentally sustainable practices and boosting the economy of the area. Adequate building facilities enhance the capacity to attract potential tourism in the area.

2. Environment: This means to be aware about the territory and its importance for the community. It means enhancing the quality of the territory and its natural resources. It means being careful about the use of materials that the local environment provides. These environmental aspects must also be integrated with the local activities.

3. Community: People who actually live in these areas are the ones who makes the place liveable. Being aware of this is important in maintaining the sense of belonging to the community, the village, and the local environment. The sense of community increases when urban centres gather activities, and new public buildings and facilities increase the ability to stimulate the life quality for the neighbours.

4. Economy: It is a difficult goal but equally important to achieve the objective of sustainable development. It is important to consider the economic aspect of buildings, insofar as it implies a set of actions aiming to revive the productive activities and the employment opportunities, as well as local business enhancement.

The actions are:

- Analyse the lack of facilities in every village as a local approach and set up a series of buildings that are necessary to give the appropriate services to neighbours and tourists.

- Support with government funds those who want to restore old buildings in rural areas.

- Organize workshops in collaboration with universities to promote the use of traditional building techniques among those who might be interested, thus creating the context for the skills to be transferred to the younger generation.

- Use of local materials in order to incentivize local economies, to decrease the dependence from bigger cities, and to reduce the environmental footprint of construction

- Use of traditional building techniques

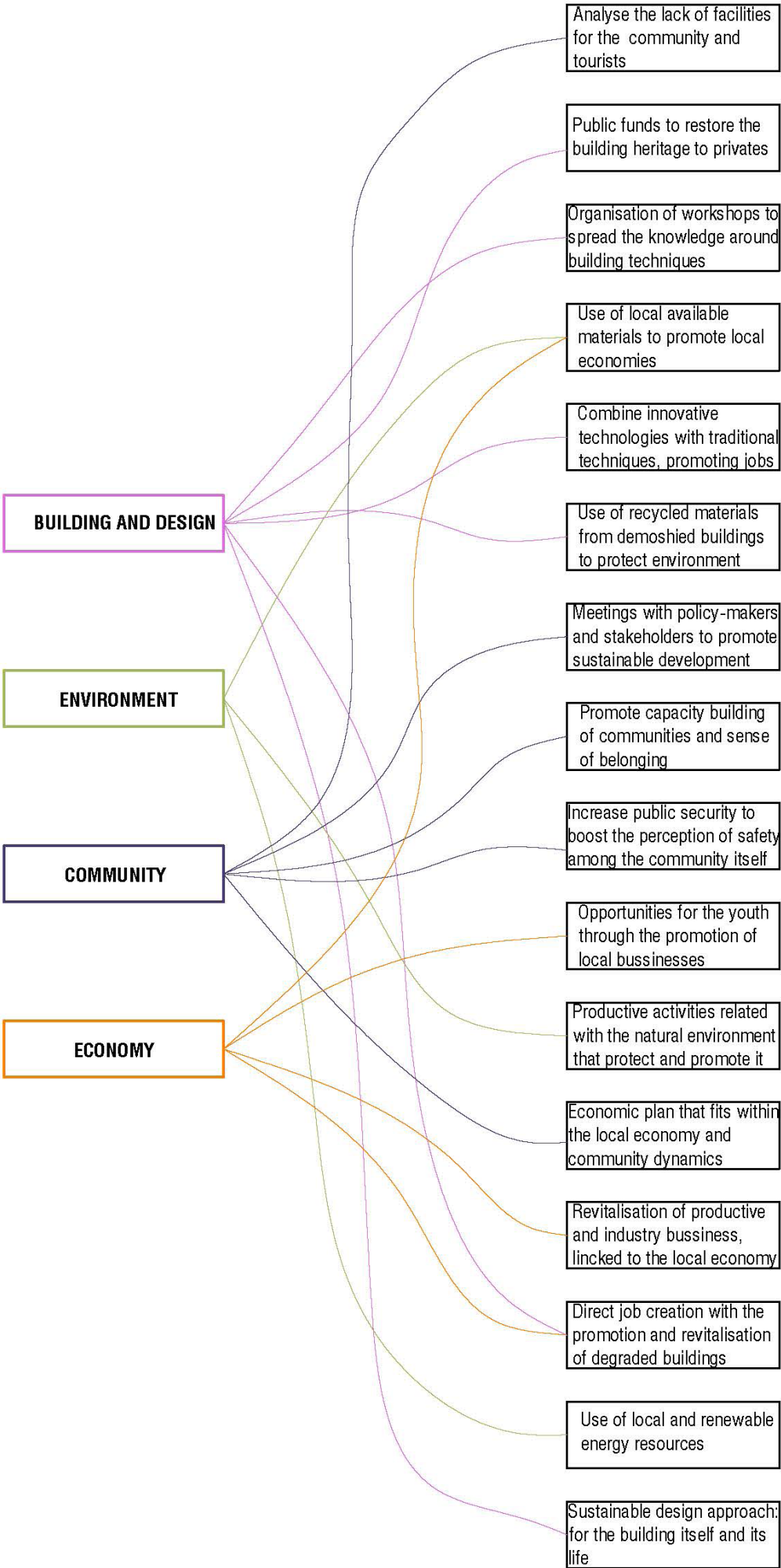


Fig.5 / Table of content: Goals linked to local actions. Source / the author



Fig.6 / Church in the old upper part of Jorgucat and the where community meets during national holidays to celebrate events. Source / the author



Fig.7 / The main road in the new modern part of Jorgucat also the main centre where public facilities are. Source / the author

that comes from tradition, combining them with the technological innovation to employ new workforces that adopt and transmit the building skills (as cultural heritage)

- Use of recycled materials, by taking the materials left from demolitions or abandoned building in order to reduce the ecological impact and create awareness of recycling
- Meet with policy-makers and stakeholders to set an open discussion about the restoration of buildings and the responsibilities of each one in the reconstruction of their villages.

- Promote the community capacity building with interventions that increase the quality of the communitarian awareness and the sense of belonging.
- Improve public safety, by increasing the perception of safety among the citizens.
- Facilitate initiatives to help young people to come back by creating an environment where working, business and residential opportunities can easily develop.
- Suitability of the natural environment, creating productive activities that are suited to the social context and the natural resources.
- Economic sustainability within a business

plan: the economic impact is evaluated as sustainable in terms of a wider economic plan

- Re-use of abandoned productive and service industries by recovering the existing buildings, and renewing them through functional and spatial interventions linked to the local economy.
- Immediate job-creating, new jobs employed with the direct link to the activities hosted or promoted by the building intervention
- Use of local and renewable energy resources beyond limiting the energy consumption during the construction and life phases of the building
- Sustainable design approach: opt for an ecologically-sustainable approach, both for the construction phase and for the building lifecycle.

With the implementation of the above-mentioned actions in relation with the four main goals to follow (Design, environment, community and economy), the objective is to stress the relationship between the revitalization of the villages with the development of those areas themselves. We believe that through actions and the implementation of policies directed to the conservation and re-valorization of building heritage, it is possible to make a gradual and incremental change of the structure of the complex social framework.

In order to make these actions useful in terms of practical application, there is a need for the policymakers to work close to the community and take into account all the stakeholders that may be involved with the process of the development of the area, and acknowledge that involving rural people themselves as partners in research is the most successful way to promote sustainable development (Chambers, R., 1983).

Conclusions

Twenty years after the end of the communism in Albania, after much abuse of reference models in the forms and language of architecture, it is important to ask ourselves how do we want to continue building our cities and villages, and in which direction do we want to develop our knowledge, in order to focus on our history, communities and dynamics of the country and promote a more sustainable way of living and building. No matter what their choice is, both the people living in cities and those in rural areas can have the resources and the possibilities to develop

their skills and knowledge. The specific actions proposed here aim to contribute to the sustainable development of the rural Dropull, with some local approaches that have been tested with other communities, in a constant search to increase the resilience of communities that takes advantage of their traditions, culture and people.

With the implementation of the four goals and further approach to the list of actions that policymakers, stakeholders and the community should cope with, it is possible to start rethinking the development of the area in a wider sense, taking thus into account all the different interrelated aspects related to the design, environment, community and economy. If we look at it in the long term, the projects that will arise from the implementation of the actions are expected to have a positive impact on the local communities and economy by raising awareness, cultural tourism, local investments and the improvement of a juridical instrument on a national and European level.

Looking at the global and local challenge and with the need of constant adaptation to the changes that rural areas face today, the purpose of this work is to highlight the value of vernacular architecture and traditional techniques as part of a suitable development model that contemporary rural areas should have. "Management policies of historical buildings can be reviewed both in theory and practice and the conservation of heritage buildings can be aided through certain forms of economic re-use." (Di Giulio, R., Zaffagnini, T., Brunoro, S., Longo, D., and Piaia, E., 2013).

If we consider the revitalization of the rural vernacular buildings as a trigger, it is possible to start a process in which the very act of 'building' or 'refurbishing' is just the beginning of a series of changes in the local economy, as well as in the community dynamics, in a relation with the environment and landscape, a process that can boost the community processes in all senses. Therefore, in order to continue improving and making those actions accessible to the local government, how could we tackle the depopulation through the lens of the vernacular architecture? How could the action of 'building' become the trigger to reshape the villages in a way that we can benefit from them? All those questions should be the next step in order to implement the work presented here.

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