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Correlation between Land Use and the Transformation of Rural Housing Model in the Coastal Region of Syria

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Abstract: The phenomenon of urban sprawl has caused radical changes in the spatial structure of cities and rural areas all around the world. Syria is among the developing countries that have experienced this phenomenon. Some of the resulted processes of urban sprawl like urbanization and counter-urbanization have had a clear impact on the land use and lifestyle in both cities and the countryside of different regions in Syria. This research focuses on the coastal region and the spatial changes that affected the nature of social life, such as the rapid growth of the population, the expansion of cities, and the new developments, which in turn have led to considerable changes in the relationship and scale of the house, garden, and landscape. The research studies the development of the rural housing model in the coastal region and its relation to the surrounding landscape. It tracks three phases of the housing unit's development and conducts a comparative study on four villages using a questionnaire to evaluate the performance of those units. The results of this research show significant change in the relationship between rural and urban areas resulting from the new residential developments, as well as the relationship of land use and the historic plot structure and that of the garden and the house into the overall character of the landscape.

Keywords: landscape character; rural housing; urbanization; counter-urbanization; heritage protection; rural social life



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1. Introduction

The phenomena of urbanization and counter-urbanization involve demographic, social, and economic processes, which can explain some significant changes (both spatial and intangible) in rural communities, especially changes related to lifestyle and land use. During the course of the last century, Syria has experienced similar processes as a result of fundamental changes in political and economic fields. The rural landscape has been radically transformed because of the rapid growth of population and the expansion of cities, to the detriment of the adjacent rural areas, the development of infrastructure, and new highways, as well as many other important developments.

Agriculture used to be the primary function of rural areas in the past, and the dominance of farmstead buildings at varying densities and in different spatial arrangements was characteristic for the architecture in the villages [1]. However, as the urbanization process was intensified with time, the rural areas became better equipped with social and technical infrastructure, and interest in an urban way of life increased; thus, new functions started to prevail over the agricultural. Those new activities, accompanied by great progress in construction to accommodate the growing population of the region, have made many farmers to turn to non-farming activities. This has led to a certain diversification of land uses, as farmers put their land to a variety of uses, such as commercial activities [1–3].

This wide range of changes has been the generator of new morphogenetic structures of rural settlements and landscapes, with the housing units taking over the farmland. Our analysis aims at exploring the changes transforming the landscape of the coastal

region, as well as identifying the positive and negative aspects of this transformation and how the relationship between man and nature is affected during the process.

2. Historical Review

In accordance with the major changes (in politics, economy, transport, society etc.) affecting the rural development of the region [4,5], three main phases of transformation of the coastal landscape are possible to identify. As a consequence, three main types of relationships between the residential building and the surrounding land and of indoor and outdoor functional layouts are possible to distinguish:

2.1. Until 1970: The Traditional Residential Unit in the First Phase

The traditional residential unit is a reflection of the feudal system, from the time when most of the people lived in poverty and had very limited capabilities, while the power and large estates were in the hands of a few feudal lords [4]. These traditional houses were built before the 1950s; the design was simple and functional, reflecting the rural lifestyle of the period. The houses had a related strongly to the surrounding land, where most of the inhabitants practiced agricultural activities as the main source of their income. The unit consisted of two parts: the inner space of the house itself that served mainly for sleeping, including a separate space to shelter and protect the domestic animals at night, and the outer space adjacent to the house, where most of the daily activities of the inhabitants occurred. This outer area resembled the living room of the house; people were very accustomed to spending their time and practicing their daily activities, such as social encounters, cooking, eating, and relaxing, in the outer space, with the exception of extreme weather situations, therefore, this area was the core of the traditional unit and allowed a strong relationship between the inhabitants and the land. The people used the surrounding land intensively as a source of food and a space for living without increasing the built area in the village (Figure 1).

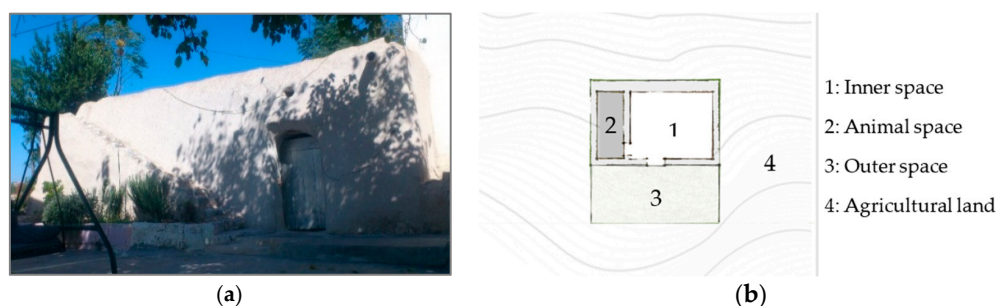


Figure 1. A traditional residential unit in the first phase, Jableh countryside. (a) The house; (b) the layout (source: photo and figure by N. Khadour).

The residential units were built by the inhabitants themselves, with traditional methods and using only materials that existed in the surrounding nature (stone, wood, and clay), which gives these units a great ecological value, as they are able to provide a comfortable atmosphere during extreme weather conditions [5].

The layout of the village developed as a combination of large properties of agricultural land that belonged to the feudal lords and much smaller properties of those traditional residential units, where locals lived and owned only the space that they live in while working for the feudal lords on the bigger plots [6]. The distribution of these traditional units was also controlled by the feudal lords. The village lacked public services and had a poor connection to the city. Its economic system relied mainly on agriculture and animal products.

The feudal and bourgeois system continued in Syria until the new law of agrarian reform was announced in 1958 [7]. The law mandated the formation of a farmer's cooperative association to support farmers who reclaimed their lands. From a social point of view, the law aimed to reduce inequality in the distribution of land among social groups in rural areas, and to reduce the severity of social injustice and the poor distribution of income caused

by poor distribution of agricultural property. From an economic point of view, the law aimed to direct rich groups to invest in other non-agricultural service sectors in order to create additional job opportunities and strengthen the national economy in general.

However, no significant change happened in the few years following the announcement of the law. It took around ten years for the results of the law start appearing clearly in the countryside in terms of transforming the social life and economic situation for the rural population. With this new development of the economic and social conditions in the countryside, a new change of the housing units and the village layout started to appear.

2.2. 1970–1990: The Traditional Residential Unit in the Second Phase

This period can be described as a transitional period between the feudal system and the communist system. It lasted for about thirty years and witnessed some simple but very essential changes regarding the rural lifestyle. After 1970, as a reflection of the improvement of the economic situation [8], the rural housing unit developed. The buildings became larger, and the animal space was separated from the inner space of the house, which reflected an improvement of the economic state of the community and their lifestyle. The outer area in front of each house remained an important part of the unit, as it still accommodates most daily activities, emphasizing the strong connection between the inhabitants and their land. This type of building has replaced the first type and dominated the rural housing scenery until the third type appears at the beginning of the 2000s.

New building materials started to appear, so while the walls of houses were still constructed of natural stone, concrete started to appear in the construction of the roofs, which led to the opportunity to create an additional floor, especially since the number of family members was increasing by marriage of the youth [9] (Figure 2).



Figure 2. A traditional residential unit in the second phase, Jableh countryside. (a) The house; (b) the layout (source: photo and figure by N. Khadour).

Although the improvement of the economic situation of the villagers had its effects on the rural lifestyle, the social ties, and in particular the kinship ties, remained very strong. In particular, all the inhabitants shared agricultural work as a common source of income, which provided them with a sense of unity and affinity.

The layout of the village has simply changed in the coastal region in this period, according to several factors, including

- o Economic factors: the abolition of the feudal system and the distribution of large properties to the villagers, providing farmers the right to own the land on which they worked. As a result, the countryside is composed of agricultural land and rural houses, which were built randomly on the farms;
- o Social factors: the increase of public services, such as schools and hospitals, as a result of the government's cultural and social service development plan for the countryside;
- o Transportation/connectivity: the connectivity between the countryside and the cities has increased dramatically because of new developments in the road system, and this

led to the migration of some of the rural population to the cities, in order to access new job opportunities other than agriculture.

The general changes that started in Syria after 1970 at the national level, accelerating even more after 1990. With the stability of the political situation in the country, the economic revival was clearly apparent in all Syrian cities. Many factories and commercial companies were established, in addition to the recovery of tourism and import and export operations.

This atmosphere initiated the urbanization process of Syrian cities, because most of the development projects were located in the outskirts, encouraging people to leave the countryside and move closer to those new job opportunities, leading to urban expansion without compatible urban development plans for the long term.

In this sense, the urbanization process in the coastal region was also initiated. Commercial activities were closely linked to the presence of seaports in the cities of Tartus and Latakia [10], which were considered Syria's gateways to the world, and most of the goods that entered Syria were arriving through these ports. This led to the development of a new transportation network to connect the coast with the inner part of the country, and to facilitate the process of distributing the goods and materials from the ports to the rest of the country.

The new roads constructed had an impact on the character of the areas which they passed through, and led to significant changes of the land uses alongside. In general, most of these roads crossed rural areas, and this led to the creation of new activities and new land uses that did not exist before. Consequently, commercial and industrial activities increased at the expense of the agricultural activity in the countryside, and more urban activities started appearing in rural areas.

2.3. After 2000: The Contemporary Residential Unit

In addition to all the above-mentioned changes and their accelerated effects during this period, population growth increased rapidly (with a population growth estimate of 2.7% between 2000 and 2007 alone [9]), which resulted in raised demands on housing units. The most important change in this sense was the change in the type of housing, where traditional rural houses were disappearing and being replaced with modern concrete buildings, which brought also great changes in the social and rural lifestyle. Consequently, the landscape has changed radically.

The new housing unit was transformed into a multi-story building (mostly 3–4 stories), constructed mainly from concrete, while the use of traditional materials has disappeared. With a more urbanized lifestyle, and less dependence on cattle breeding, there has been no more need for spaces assigned for animals within or adjacent to the house, and the agricultural land that surrounded each unit was neglected as the new housing model weakened the relationship between the inhabitants and the surrounding landscape (Figure 3).



Figure 3. A temporary residential unit Jableh countryside. (a) The unit; (b) the layout (source: photo and figure by N. Khadour).

The structure of the village has changed drastically (especially after 2011, as the Syrian crisis resulted in families migrating from conflict areas and settling in the coastal region, which was considered as a safe area, thus inducing additional housing demands). The multi-story, concrete buildings dominated the views and the scenery of the village,

introducing an urban way of living into the countryside, which was reflected in many aspects. The social ties and relationships of the inhabitants started to weaken as the new model of houses lost the outer open area, which was the core of the rural social life. The more enclosed type of the housing unit encourages independent life, creates boundaries, and decreases the chances of daily encounters and communication, which was a main and celebrated attribute of rural living. Furthermore, as the economic system continued developing, people started finding new investment opportunities to answer the needs of a new lifestyle, and new commercial and service activities started to replace the agricultural ones as they provided easier and faster income. As a result, the cultivated land around the villages became fragmented and abandoned. The Regional Planning Commission in 2005 [11] established that the percentage of workers in the agricultural sector in the coastal region decreased from 35% in 1990 to 11% in 2005, while 60% of the workers are in the services sector and 20% work in commercial activities. This indicates a very serious transformation in the overall status of the coastal region, as it is shifting from being an agriculturally productive region to a consumer region. As a consequence, the balance of the region in social, ecological, and economical fields is being compromised.

As shown in Figure 4, there is a clear relationship between the layout of the residential units and their distribution and the character of the landscape. In the first phase, the landscape is the dominant feature of the rural landscape, where housing units are small in number and allocated randomly, giving priority to preserving the agricultural land. In the second phase, we can observe the appearance of a more organized pattern, with an increasing number of houses around a center, which makes the agricultural land relatively peripheral but still retaining its important role in rural life. As the influence of urbanization grows, the third phase brings an increasing number of roads and a higher density of the built area on account of the agricultural land, which becomes fragmented, losing its dominance over the built area.



Figure 4. Evolution of the general layouts of the village types (source: photos and drawings by N. Khadour).

3. Materials and Methods

This research deals with rural development in the coastal region of Syria. The Syrian coast is located on the western coastal front of the Syrian state, between the Mediterranean Sea (as the western boundary) and the coastal mountain range that stretches along the coast from the eastern side. The coast extends to a length of 330 km and a width of 30–50 km [12], and includes two governorates: Latakia in the north and Tartous in the south.

The landscape of the Syrian coast is diverse, from the plains that extend from the sea in the west to the mountain areas in the east, with a width ranging between 15 and 20 km. There we can find urban and semirural settlements with fertile agricultural land. The highest point of the Coastal Mountain Range running parallel to the coast is Nabi Yunis (1575 m) near Latakia [13].

The western slopes catch moisture-laden winds from the Mediterranean Sea, and are thus more fertile and more heavily populated than the eastern slopes. In general, the coastal region has a mild Mediterranean climate with a dry summer, and the average temperature is 25.8 °C in the summertime (average June–August) and 12.8 °C in the wintertime (average December–February) [14].

The general analysis focuses on the mountain area of the coastal region; however, a deeper comparative analysis was conducted on four villages (Bet Yashot, Hellet Ara, Helbako, and Almnaizlah) that are located along a main highway axis connecting the coastal region with the middle region, each with a different height and distance from the city (Jableh) shown in Figure 5. The reason why those villages were chosen is related to their location in the mountain area, within the western part of the ridge, because the changes in the landscape were stronger and more spectacular here than the changes in the plains. The latter are further away from the urbanized areas, and thus have been less developed and have kept their vernacular traditions and system for a longer period of time.



Figure 5. Illustrative diagram of the study area (source: Google earth).

The four villages are located sequentially on an axis related to the city center of Jableh, which gives them particular attributes regarding their relationship to a highway connecting the coastal region to the middle region, which was constructed between 1985–1989.

This paper is based on an extensive international overview regarding urban and rural heritage protection and planning guidelines [15–20], comprehensive studies in the field of urban and rural planning regeneration and development [21–35], and case studies in good practice of urban and rural development [36–47]. Using the conclusions of international experiences in the field, the research proceeds with an analytical study of the housing models in the study area, in order to have a clear understanding of the morphological change of each model and its impacts on the social life and the interaction between man and nature. Furthermore, the comparative study on the four villages in the study area is conducted by the use of a questionnaire, in order to get feedback from the inhabitants of those villages and be able to evaluate the performance of each model in the end. Depending

on the results, the research will define the correlation between the housing model and the land use as a main goal of the research and provide recommendations.

The analytical study of the four villages will rely on the data collected by the questionnaire, which was a “random sample” distributed to 200 people from the village inhabitants (The portion was close to 1.5% of the population in 2004 per village [48]). For the distribution of the questionnaires, an important consideration was that half of the participants were living in traditional houses and the other half were living in contemporary houses.

The questionnaire was distributed in different proportions to suit the population numbers of each village, as shown in Table 1.

Table 1. The questionnaire distribution numbers in the surveyed villages.

Village Name	Population [48]	Total Number of Questionnaires Distributed in the Village	Number of Questionnaires for Traditional Houses Group	Number of Questionnaires for Contemporary Houses Group
Bet Yashot	6115	90	45	45
Hellet Ara	3155	50	25	25
Helbako	1949	30	15	15
Almnaizlah	1633	30	15	15

The results of the questionnaire were divided into four parts:

- Part 1: General characteristics of the participating groups and their lifestyles;
- Part 2: Transportation system;
- Part 3: Social life;
- Part 4: Ecological aspect.

Each part includes a group of factors that are related and provide specific indicators for the assessment of the questionnaire results.

4. Results and Discussion

4.1. General Characteristics of the Participating Groups and Their Lifestyles

By analyzing the results of the first part of the questionnaire displayed in the summary table, we notice that the average age of the inhabitants living in traditional houses is higher than the average of those living in contemporary houses, and this comes as a logical result after the rapid growth of population during the last three decades, which has increased the demands on constructing more houses in a short time scale. Therefore, the younger generations moved to live in these newly constructed houses, as they are more capable of adapting to a new lifestyle than the older-aged groups, who can be much more attached to their inherited customs, traditions, and lifestyle (Table 2).

By analyzing the results of the first part of the questionnaire displayed in the summary.

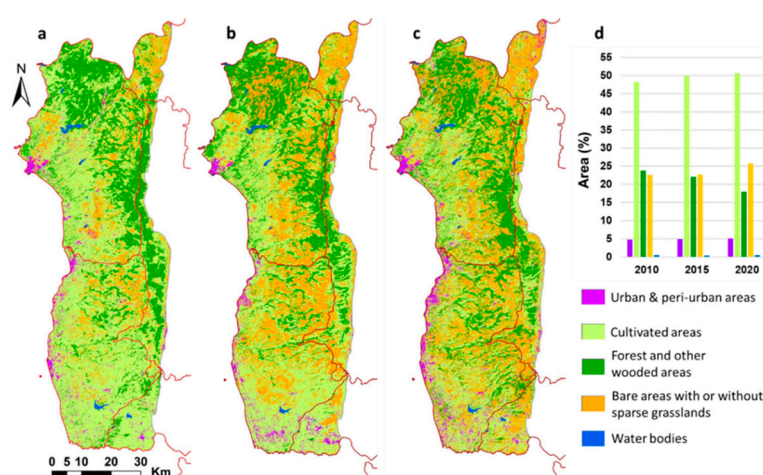
Most of the residents of traditional houses own agricultural land, and most of the family members are engaged in agricultural activities. A significant difference can be observed in the second group, where the majority of the residents of new houses are employees in the service sector, and most of them do not own agricultural land (only 35% do). However, most of those who own agricultural land do not engage in any agricultural activity.

These data reflect the change of the concept of agricultural work among residents. For the residents of traditional housing, farmland is still considered as the main pillar of their lives, and agricultural income still counts as essential in their economic system. Therefore, they have stronger connection to their land, and they pay more attention to agricultural activities, because the design and the structure of their houses facilitate this connection to the farms and the surrounding landscape. In contrast, the lifestyle of the residents of new houses has changed. Agricultural work is no longer a priority, as it is no longer considered the primary source of income and a basis of their economic system. Instead, they started heading to government and private jobs that provide a stable income, unlike the agricultural income, which is very much dependent on the weather.

Table 2. Questionnaire results related to the characteristics of the participating groups and their lifestyles.

	Traditional Houses 100 Participants, 100%				New Houses 100 Participants, 100%			
	50 Years ($\sigma = 15.2$)				39 Years ($\sigma = 11.5$)			
Age average (σ = stander deviation)	Employees 15%	Farmers 64%	Craftsman 11%	Other 10%	Employees 72%	Farmers 12%	Craftsman 7%	Other 9%
Professions								
Where do you prefer to live?	In the village 78%		In the city 22%		In the village 51%		In the city 49%	
Which type of houses do you prefer to live in?	In a traditional house 69%		In a modern house 31%		In a traditional house 48%		In a modern house 52%	
Do you feel that your house fits the surrounding landscape ?	Yes 98%		No 2%		Yes 66%		No 34%	
Do you own agricultural land in the village?	98%		2%		35%		65%	
If yes, do you do any agricultural activities on this land?	78%		22%		42%		58%	
Any of your family members help with these activities?	55%		45%		25%		75%	
Do you feel that you belong to the place that you live in?	94%		6%		68%		32%	

Figure 6 represent the land use changes in the coastal region in general between 2010–2020 [49]. We can see the increase in the bare and uncultivated lands, especially in the mountainous area of the Syrian coast region, with an increase in the proportion of urban areas, while the plains region is still witnessing agricultural activities, due to the availability of favorable conditions for agriculture, such as fertile land, availability of equipment, and ease of transportation.

**Figure 6.** Land use and land cover in the Syrian coastal region between 2010–2020 (source: [49]).

Another factor that has fostered changes in the way of living is the increasing interest in education in rural areas. For educated people, the pursuit of specialized work suited to their education is more common than going into agricultural work that depends on acquired experience and physical effort. That is why we can see that the design of contemporary houses does not focus on the connection with surrounding nature; hence, the residents of these houses lost that feature, and have been relatively distanced from practicing the agricultural activities specific to this area, and even from small-scale manifestations like gardening. They also lost a certain form of social interaction and traditional gatherings, which were essential for achieving a sense of unity and closeness between the rural residents.

On the other hand, the fact that the residents of traditional houses have participated in the process of building their homes with their hands, and that the building materials are natural materials, provides this group with feelings of belonging to the rural environment,

which cannot be said about the other group, whose houses came as a response to the increased demand on housing, without respecting the historical legacy of their environment.

To sum up, the relationship that links the residents of traditional houses with their environment and homeland is much more significant than for those living in contemporary houses. This can be explained by the different reality and conditions they are facing, as members of the latter group are in a daily contact with the city, since most of them work there. They will have different needs and develop a different mental image of their life routine related to the practical and artificial lifestyle of the city.

4.2. Transportation System

One of the statements on the questionnaire was “Please give an evaluation of the public transportation system in your village”.

Through the results of the questionnaire were related to the effectiveness of the public transportation system in the studied villages, as shown in Figure 7, we can see that the evaluation of the transportation means by the inhabitants of the villages seems to be more positive and rated as effective in the villages closer to the city.

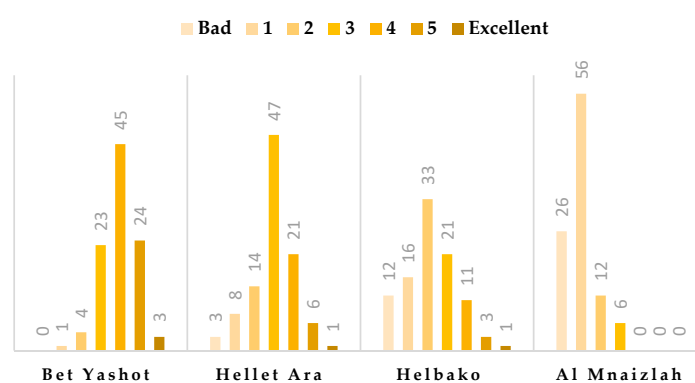


Figure 7. Questionnaire results related to the transportation system.

Comparing these results to the statistics issued by the Regional Planning Commission in Latakia in 2008, related to the proportions of workers in the agricultural sector shown in Table 3 and the proportion of contemporary and traditional housing in the study villages shown in Figure 8, we note that the ratio of workers in the agricultural industry decrease gradually in the villages that are closer to the urban center. At the same time, the amount of contemporary housing is increasing progressively by getting closer to this urban center, while the numbers of traditional houses are greater in the villages that are farther from the center of Jableh.

Table 3. Percentage of workers in the agriculture sector and other sectors in the studied villages, from the Regional Planning Commission in Latakia (2008).

Village Name	Distance from the City	Agriculture	Industry	Real Estates	Constructions	Restaurants Hotels	Transportation	Service Sector
Bet Yashot	20 Km	4.5%	3.0%	0.5%	4.7%	2.5%	2.7%	81.5%
Hellet Ara	25 Km	12.0%	2.5%	3.5%	5.0%	5.0%	4.5%	67.5%
Helbako	30 Km	22.0%	1.5%	3.0%	4.5%	4.0%	4.0%	61.0%
Al Mnaizlah	35 Km	35.0%	3.0%	2.5%	3.0%	2.5%	3.0%	51.0%

Similarly, we can see a clear relationship between the effectiveness of the transportation system and the increasing impact of urban areas on the surrounding rural environment, and the decisive factor appears to be the proximity of the new housing to the urban center.

This is largely related to the overlap of economic systems between cities and the surrounding rural centers, which has increased by facilitating connectivity through the transportation system. At the same time, rural areas farther from the urban center, with less effective transportation systems, seem to have preserved the traditional way of living—

that is, the villages that are difficult to reach have more independent economic systems, and their built and natural environments kept the traditional character.

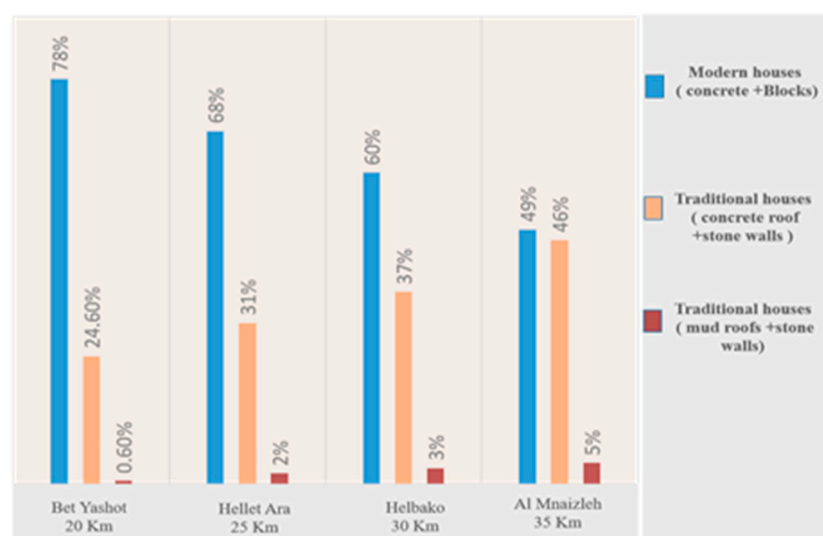


Figure 8. The ratio of modern and traditional houses in the four villages. Source: The Regional Planning Commission in Latakia, 2008.

4.3. Social Life

The third section of the questionnaire includes questions related to social life in the Syrian coastal countryside. Based on the results, it is clear that social relationships and ties have changed for the residents of the new and traditional houses, which has affected social life in the countryside in general. (Table 4)

Table 4. Questionnaire results related to social life.

	Traditional Houses: 100 Participants, 100%					New Houses: 100 Participants, 100%				
Do you do any activities in the nature around you?	No 8%	Picnic 14%	Sports 61%	Farming 84%	Other 22%	No 24%	Picnic 34%	Sports 53%	Farming 22%	Other 24%
Do you have good relations with the neighbors?	Yes 76%	Medium 16%	No 8%			Yes 33%	Medium 49%	No 18%		
Do you share your house with another family (are the different generations live together)?	Yes 68%	No 32%				Yes 19%	No 81%			

The social relationships and ties that link the residents of traditional houses together are stronger and more durable, and this is due to several reasons; most important among them is the layout of the traditional residential units, which were open towards the outside, allowing a physical connection to the surrounding environment. This allowed visual connection to other houses, encouraging more social interaction and weakening boundaries. The rural society with traditional houses was considered to be an integral unit, where people coexisted in very harsh conditions in terms of political and economic organizational aspects. In particular, when the feudal system was dominant over the entire countryside of the coast, it was very important for the inhabitants to stand beside each other and strengthen their relationships.

On the other hand, a significant characteristic of the traditional residential unit was that it occupied a relatively large area and accommodated more than one family, as a result of difficult economic conditions that the Syrian coastal countryside witnessed in recent decades, so it was useful to increase the number of family members for a better life, as it was seen as an increase in the workforce in agriculture, and thus an increase in the financial income of the family. Due to this state of family unity and economic difficulties, when a family member

wanted to get married and form his or her own family, a new room was constructed attached to the original house as a solution to avoid wasting agricultural land and money.

The changes in the rural economic system during the past three decades, along with increased connections to the nearby urban areas by the transportation system and the move of large number of rural residents to live or work in the city, have led to clear changes in social life in the countryside. The influence of urbanization has started to appear in every aspect of the rural inhabitant's daily life, and a tendency toward increased privacy and emphasis on territorial boundaries has started to develop. This process was reflected in the spatial structure of the village with the increase of multi-story buildings similar to those in the city, due to the profit they provide to the owner, since they can accommodate multiple families, with each having an independent home and life.

4.4. Ecological Aspect

According to the results displayed in Table 5, there has been a clear shift in the perception toward the land and how it can be used. Instead of the old traditional gardening and agricultural activities that were meant to provide the daily needs of inhabitants, people have started to allocate all of the land to grow more profitable crops that provide more and stable income, such as olive trees and tobacco (see Figure 9).



Figure 9. Tobacco cultivation in Bet Yashout (source: photo by N. Khadour).

It is clear that both new and traditional houses suffer from some functional problems, but the nature and quality of these problems differ between the two types.

The traditional houses have challenges in adopting innovations, such as the ability to allow electrical installations, since most of them need electrical connections to be installed inside the walls built of stone. In contrast, the contemporary houses were built taking into account requirements like electrical appliances and their extensions, as well as advanced sewage systems. On the other hand, most of the problems that the residents of contemporary houses suffer from are related to the special environmental and climatic conditions in this rural mountain area, which is characterized by cold, rainy winters and mild summer weather. Most of the residents suffer from moisture inside their homes and difficulties with thermal insulation, especially in the winter. The traditional houses are more adaptable to the environment in that sense; they are more efficient from an ecological aspect, because they are built with local natural materials and inherited traditional methods, which give these type of houses more ecological value. For example, the natural stone used in construction constitutes significant thermal insulation, and maintains a moderate temperature inside the house in summer and winter; in addition, the rainwater from the winter was stored in tanks built from stone adjacent to the house, to be used later in the summer. The ecological superiority of the traditional housing units is very clear compared to the incompetence of the contemporary ones, which were designed and built with no other consideration than a quick solution to accommodate the increasing population.

Table 5. Questionnaire results related to the ecological aspect for the houses in the studied villages.

Traditional Houses: 100 Participants, 100%						New Houses: 100 Participants, 100%				
If you live in a new house: Do you have any connection with the surrounding landscape?						Yes, I have a garden and I use it 21%			Yes, I have a garden, but I do not use it 23%	No, I do not have any connection 56%
	Yes 53%	No 47%				Yes 62%	No 38%			
Do you have any problems with your house?	Thermal insulation 7%	Moisture problems 14%	Sanitation problems 43%	Electrical Problems 62%	Water problems 14%	Thermal insulation 63%	Moisture problems 71%	Sanitation problems 5%	Electrical Problems 11%	Water problems 54%

5. Conclusions

The major changes that occurred in the Syrian coastal region during the last century in political, social, and economic terms have led to fundamental changes in the planning of the coastal cities and fostered their economic growth, which has transformed them into polarization centers [50]. This has encouraged migration from rural areas towards the urban centers, because they provided more work opportunities. This has initiated the process of urbanization and counter-urbanization in the region.

The effects of urbanization have reached some remote villages of the Syrian coast, and this was facilitated by the development of the transportation system, which led to a significant change in the land use in these villages, especially in those with direct connection to the main transportation routes. The income provided by commercial and industrial functions developed along these routes has presented a more stable and reliable source of living than agricultural income, which is subject to weather. However, the construction of regional roads, such as the highway connecting the coastal region with the middle region in the study area, brings radical changes and development to the surrounding areas, and in some cases, it can be a threat to losing heritage values. That is why a comprehensive plan should address these aspects, and make sure that the impact of this construction is controlled and preplanned.

Over the last three decades, the impact of these changes has increased to include most rural areas on the Syrian coast, but in varying degrees, depending on its position relative to the urban centers.

Changes in land use in rural areas have been accompanied by changes in housing models. The recent residential development model represents a new style, with a greater resemblance to the urban modern residential units, and thus has abandoned some attributes and values to learn from architectural ingenuity in adapting to the close environment and the tangible evidence reflecting the inhabitants' traditions and strong connection with nature. Furthermore, the old traditional house was constructed of natural materials, and presents an ecological housing model that is compatible with the environment of the region, while the recent model has lost this advantage due to the use of concrete and artificial materials. The diversification and change of activities in the areas adjacent to the rural houses has had a great impact on the nature of interaction between the village residents and nature. The horticultural activities have deteriorated, and residents no longer rely on the land to provide their daily needs of food and supplements, as these were easy to access from newly found commercial businesses. The agricultural activities are now limited to producing crops for commercial purposes, especially tobacco and olive fruits.

The case study reflects the variety of impacts of urbanization and counter-urbanization processes, which appear clearly in every detail of the lifestyle of the community; however, the developments that are related to the change in the use of lands, which have a direct impact on houses and the new way of interaction between the dwellers and the surroundings of their houses, is very crucial. The questionnaire results indicate a loss of connection and change in the recognition of nature for the dwellers of the new housing model, which can create difficulties for future development plans, especially ones that aim to restore the values and characteristics of the coastal region, as it can be harder to motivate people to engage in the process without the appreciation of their values.

New technologies and materials in housing result in ecological disadvantages, as well as negative consequences for living conditions (poor heat isolation, dampness problems, connection to nature lost). The answers to questionnaires clearly reflected that ties to the local landscape are much stronger for those living in rural areas than for those residing in crowded contemporary urban housing. The economic dependency in agriculture and direct connection to nature result in a greater awareness towards the landscape among the inhabitants living in rural places, with lifestyle contributing to the preservation of the landscape character and identity.

Although the development projects for the region were planned to improve the quality of life of the rural areas and provide more services to these areas, they had also an impact

on the identity and the cultural heritage of the countryside in the region, and made it take an undesirable direction. It gave the villages the characteristics of the city with no regards to the important assets of the natural environment and its contribution to the social life and spatial identity of the countryside.

Housing and rural development policies must focus on the importance of the cultural and social dimensions of rural society, which preserve the essence of the relationship between man and nature and prevent the transformation of rural housing into a consumer unit that forms a barrier between the inhabitant and the natural environment.

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