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"Dangerous" Buildings and Urban Planning: Locus, Legal Framework and Assessment for the City of Larissa

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Abstract: Dangerous, vacant and abandoned buildings traditionally have been considered as negative elements in the urban environment. Their "harmful" properties include hosting "nests" of criminality (drug trafficking etc.), becoming a threat to public safety (easy to catch fire, collapsing building materials etc.), degrading conditions of public health (rubbish damp, rats infesting etc.), affecting property values in the surrounding areas, loading their owners with taxes (property tax etc.) and no revenues, imposing negative impacts on the aesthetics and the quality of the urban environment. On the other hand, they might trigger opportunities for urban regeneration, provide new available spaces for urban uses if demolished, and provide a stock of urban elements of special characteristics, to be used for the formulation of housing policies. The present article reviews urban policies focusing on these properties and assesses existing implementations. The various factors characterizing the above initiatives constitute challenging planning and legal cases. The complexity of the issue of abandoned buildings in the urban environment, is to be tested in the case of the city of Larissa, Greece. Legal and planning inadequacies in dealing with the above will be investigated, and proposals for the formulation of policies and legal tools will be synthesized.

Key words: Dangerous buildings, legal framework, regeneration, resilience, urban planning.

1. Introduction

"Dangerous" buildings are a problem with many dimensions in modern cities. In fact it is a common problem of all cities. To a large extent these buildings are the "ugly" from a visual point of view result of urban shrinkage, as well as the expected result of the ongoing economic crisis [1]. Recently these buildings have also been linked to the issue of urban resilience [2]. In any case, the economic crisis further exacerbates the problem that has arisen with "dangerous" buildings and, consequently, local communities—and through them the respective Municipal Authorities—are called upon to deal directly with this problem, in the context of urban sustainability [3, 4].

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"Dangerous" buildings are a problem because they create "nests" of crime (e.g. drug trafficking), threaten public safety (e.g. vulnerable/fire risk, accident due to the fall of building materials), degrade public health conditions (e.g. storage and collection of solid and liquid waste, concentration of rodents), affect the worst, i.e. reduce the values of the properties in the area where they are located but also in the surrounding areas, reduce the income of their owners by limiting to a minimum the possibilities of their exploitation but pay high taxes for their possession (e.g. property tax) and, above all, cause negative effects on the aesthetics and quality of the urban environment. In any case, these buildings give an image of abandonment of the area, even of the city itself, which according to the theory of the "Broken Window" leads to multiple and different social problems [5].

Are the "dangerous" buildings exclusively a Greek phenomenon? The truth is that, if one looks at the

relevant foreign literature, can identify innumerable examples from cities abroad, which in one or more phases of their historical and urban development faced the same problem [6, 7]. But focusing on today and the Greek case, according to a recent study about 1,800 buildings are empty (vacant) in the center of Athens [8]. The Integrated Urban Intervention Plan (SOAP in Greek) states that the abandoned buildings of the center of the capital of Greece are about 400 [9]. Nearly, 85% of these buildings need some intervention to modernize and improve energy efficiency. One third of them have as main use that of "professional-freelancer" and one fourth of them "residence" [10]. One of the most characteristic issues in relation to these buildings is that of their old age, since about 60% of the building stock of the center of Athens has been built before 1960 that is 50 years ago. In terms of geographical concentration and further specialization of uses, it is characteristic that "professional-freelancer" use is concentrated around the "Omonia Square", while the use of "residence" is mainly found in the area of Plaka, one of the oldest urban areas of the city, if not the oldest [11].

Perhaps the most important problem with these buildings is the one concerning their ownership, and more specifically the fragmentation of each property into many co-owners/heirs (10 on average and with different kinds of legal status) [12]. For example in the area of "Gerania" the number of owners in a building block reaches 596. At the same time, however, other factors contribute to the deterioration and depreciation of these buildings, such as: first, the high cost of repairs and maintenance which in most cases exceeds the current market value of the buildings; secondly, the time-consuming approval procedures by the many co-competent public services/authorities, in the case of repair, restoration, restoration, etc.; thirdly, the restrictions on uses due to the (small) size of the properties and the existing institutional framework, etc.; fourthly, the lack of substantial financial incentives for their repair, maintenance and reuse.

In this context, the following work deals with the issue of "dangerous" buildings focusing on the city of Larissa. In terms of methodology, the archival material of the Directorate of Urban Planning of the Municipality of Larissa (public authority), which is responsible for the so-called "dangerous" buildings, is used under the conditions described in the next section (Section 2—The Existing Institutional Framework). In terms of the purpose of the work and the conclusions it draws, these relate to the following: First, an assessment of the existing policy is being undertaken and, by extension, of the existing institutional framework in terms of its effectiveness, starting from the exploitation of archival material. This assessment obviously includes the detection of "dysfunctions" and "weaknesses" in the existing institutional framework but also at operational level (how efficient is public administration on this issue?). For example, we can talk about efficiency if all "dangerous" buildings of which the archival material is made up are now a thing of the past, that is to say, they have been demolished. This answer can only be given after an on-site autopsy, which is carried out for the purposes of the work in question. Last, but not least, the whole work is based on a main hypothesis, that is the interrelated and interactive relationship between "vacant", "abandoned" and "dangerous" buildings: the today's "vacant" buildings in time $t = 0$, will be "abandoned" in time $t + 1$ and, ultimately, "dangerous" and to be demolished in time $t + 2$. Therefore action is required in advance and, therefore, an appropriate legal framework.

2. The Existing Legal Framework

The Greek institutional framework is quite old, in the sense that the problems associated with these buildings are dealt with the Presidential Decree (DP) "on dangerous buildings" of 1929 (153/A/1929). There is, however, also Law 1512/1985, where article 1 imposes an obligation on owners to "maintain and keep their properties in good condition" and

underlines that in relation to the issue of abandoned buildings there are two categories in which municipalities (1st level of local administration and governance) are involved: buildings characterized and classified as "dangerous" following an official complaint (from a citizen) or reference under the above Presidential Decree (DP) in terms of static, structural, hygiene (responsibility of the so called "Region Authority", 2nd level of local administration and governance) and against fire (responsibility of the Fire Department).

In summary, the Greek institutional framework refers only to the term "dangerous". The buildings are classified as dangerous on the basis of an autopsy by the Directorate of Urban Planning of the Municipality concerned. Autopsy reports shall be communicated to the prosecutor and the local police department. On the basis of these reports, the owner is required to take immediate interim measures and his obligation to permanently remove the risk within six months. Under the DP, if the owner does not implement the measures indicated within the time limits, Directorate of Urban Planning shall remove the risk by applying the measures of forced evacuation and demolition of dangerous parts of the structure, provided that the disuse is not considered sufficient to avoid the risk. For buildings characterized "dangerous" from a structural and static point of view, several short in time and clear administrative procedures are provided for measures to remove the risk of collapse, with the complete demolition of the crumbling building a last resort. However, its implementation requires political will, determination and precise compliance with the procedures laid down.

But let us look in more detail at the administrative procedure followed, because this procedure fills in the file and, by extension, the archival material on which the first part of this work is based. The process begins in two ways, whether as a designation of a dangerous building after a citizen has made a request or not. Presidential Decree 13/22-4-29 recognizes four cases of "dangerous" buildings: firstly, "dangerous" from a static and structural point of view (commonly moribund), secondly, "dangerous" from the hygiene point of view, thirdly, "dangerous" from the point of view of fire safety and fourthly, "dangerous" from the point of view of public traffic within assembly areas.

In the first case (commonly a crumbling building) the risk is due to: insufficient or poor foundation, poor quality or composition of the materials of which it consists, botched construction, excavation or corrosion of water or other liquids and improper arrangement or connection or insufficient dimensions of its elements. The criteria in this case of designation are the proven existence of sediments, derogations, decomposition of masses of masonry, cracks, and public safety issues. The second category of "dangerous" buildings is those which "do not meet the relevant conditions laid down in the building regulation". Fire-hazardous buildings (the third category) are those which "do not meet the relevant conditions laid down in the Fire Protection Regulation". The buildings that are dangerous in terms of public traffic within assembly areas are those that "do not meet the conditions required for comfortable and safe public traffic, comfortable monitoring of spectacles and audiences, etc. and rapid and safe evacuation in the event of a sudden emergency".

The administrative procedure followed each time by the Directorate of Urban Planning for the designation of a building as "dangerous" is presented in Fig. 1.

Three points should be further clarified: the 4 criteria referred to in stage 3 (Fig. 1) are "static and structural hazardous", "hazardous from a hygiene point of view", "fire safety hazard" and "dangerous in terms of public traffic within assembly areas". The text-autopsy report of stage 4 includes the description, type and extent of the risk, the measures and the time of recovery and the decision to impose sanctions or alternative demolition. The three members of the stage

7 committee are different from the public official of the Office (Directorate of Urban Planning of the Municipality) conducting the stage 2 inspection-autopsy.

However, it is also important to mention that:

• The Directorate of Urban Planning of the Municipality can take action against a building and without a request from a citizen, i.e. based on the initiative of one of its public officials (self-fair action).

• The Directorate of Urban Planning of the Municipality may issue a demolition order if it considers that the situation for a "dangerous" building is "urgent" and "requires immediate intervention".

• Each building with a construction date before 1955 (as given information under a building permit or as an estimate of the year of construction) and 100 years from the current inspection date goes through a different administrative examination process.

• In relation to the previous one, an opinion is sought from the Regional Architectural Council (called SYPOTHA in Greek) on buildings "built before 1955" and from the Ministry of Culture on buildings "built 100 years ago". Obviously in these cases the possibility of the existence of a "preserved" building, or more generally of a building in need of protection due to its architectural value and its connection with issues of preservation of the Greek cultural heritage is being investigated.

Stage 1: Citizen's complaint.
Stage 2: Inspection by an engineer.
Stage 3: Risk assessment (4 criteria)*.
Stage 4: Inspection report**.
Stage 5: Notification to the owner(s).
Stage 6: Objection(s) against the report.
Stage 7: Examination by a committee (3 members).
Stage 8: Restoration or demolition by the owner.
Stage 9: If not, the municipality acts and charges the owner with the expenses.
Stage 10: In the case of a dangerous and abandoned building at both construction and hygiene level, if the report is unanimous, there is no possibility for objection.

Fig. 1 The administrative process of characterization of a building as dangerous (stages).

3. Methodology and Data

As already mentioned for this work, a specific methodological approach is followed with regard to the collection and elaboration of data. At the first level, document data are used in paper form on the basis of each file of the Planning Directorate's archive under the heading "dangerous building". Each file is examined individually and then followed by an autopsy visit based on the address declared in the file, in order to record its "current" or otherwise existing situation.

In more detail, a database was constructed to take advantage of the "useful" information in each file. This was followed by the construction of maps capturing every dangerous building in GIS. However, several files were incomplete in evidence. In the event that there could not be any use of the information material, the specific case of the dangerous building was excluded. Each folder ideally (i.e. a complete folder) has the following documents, from which the first 8 fields in the database are derived:

(1) Year of establishment of a dossier;

(2) Address;

(3) Description of a building problem;

(4) Owners;

(5) Autopsy report;

(6) Status;

(7) Demolition (decision & date);

(8) Specific reference/information: pre-1955, preserved;

The following fields were added to the above:

(9) Building block (OT);

(10) Area (link to existing GIS city plan);

(11) Description of a building problem: coding (a);

(12) Status: encoding (b).

More specifically:

- The field (11) "description of a building problem: coding (a)" is further specified and described as: building (general reference), building (ground floor, 2 floors, 3 floors, shop, warehouse), building (part: view, etc.), building (fencing), building (wall, and building (shed).
- The field (12) "status: coding (b)" is further specified and described as: dangerous (general reference), dangerous from a static point of view, dangerous from a hygiene point of view, dangerous from a static and hygiene point of view, dangerous—needs repair, other cases (without any further reference).

On the basis of the above, maps were constructed with the following themes (backgrounds): first, location- placement in the existing city plan, secondly, based on the type of problem and, thirdly, on the basis of the seriousness of the situation. In total, 284 cases (folders) encoded "building" have been recorded and these are the sample of the database based on the archive of the Directorate of Urban Planning.

4. Results

There are a total of 433 cases—files under the heading "dangerous". Of these 284 concern a "dangerous" building, with 279 located in the city of Larissa. The remaining 149 cases concern a "dangerous" part of the building (e.g. part of the wall, ceiling, balcony, construction details), which means that under no circumstances would a demolition decision be issued for them. For 220 of the 284 cases of a "dangerous building", there is a decision and date of demolition on the basis of a relevant document. Based on this document, each case is considered finished/completed for the Directorate of Urban Planning and placed in the file. For the remaining 63 cases, this document does not exist in the folder. According to public officials Directorate of Urban Planning, this can mean two things: either the above document was never issued and the whole administrative process was stopped for many "internal or external reasons" or the document was issued but was lost and is not included in the file. In any case, what really happened to these cases is unknown, i.e. whether or not the demolition took place.

The "geography" of dangerous buildings with or without a demolition decision, through their imprint on the existing city plan shows that about 60% of them were concentrated in four very central and "old" areas of the city and more specifically in the areas of "Agios Athanasios", "Agios Konstantinos", "Agios Achillios" and "Agioi Saranta" (Fig. 2). On the other hand, in the most recently included areas in the city plan there are fewer dangerous buildings with or without a demolition decision, such as the areas "Averof", "Neapolis", "Agios Thomas" (now included in the city plan in relation to its western part) and "Agios Georgios". The placement of the areas of "Agios Konstantinos" and "Agios Achillios" high in the total ranking is by far impressive, especially if one has a sense and has studied the urban development of the city. However, the low number of dangerous buildings in the area of "Agios Nikolaos" is impressive, although it is one of the oldest districts of the city of Larissa. This has to do with the history and social structure of the city. In any case further interpretation and explanation will be given in the next section of the work.

This is therefore the geography of dangerous buildings based on the archive of the Directorate of Urban Planning. But the main concern remains: what was the final development and final outcome of the 220 "dangerous" buildings for which a demolition decision has been issued? An answer to this concern was given by the on-site autopsy on them and the detection of the current situation.

More specifically, about 50% of them have been exploited by private individuals and in place of the dangerous building an apartment building has been constructed, with main land use that of "residence" (at all levels except the ground floor). Nearly, 24% of them after being demolished are now implemented

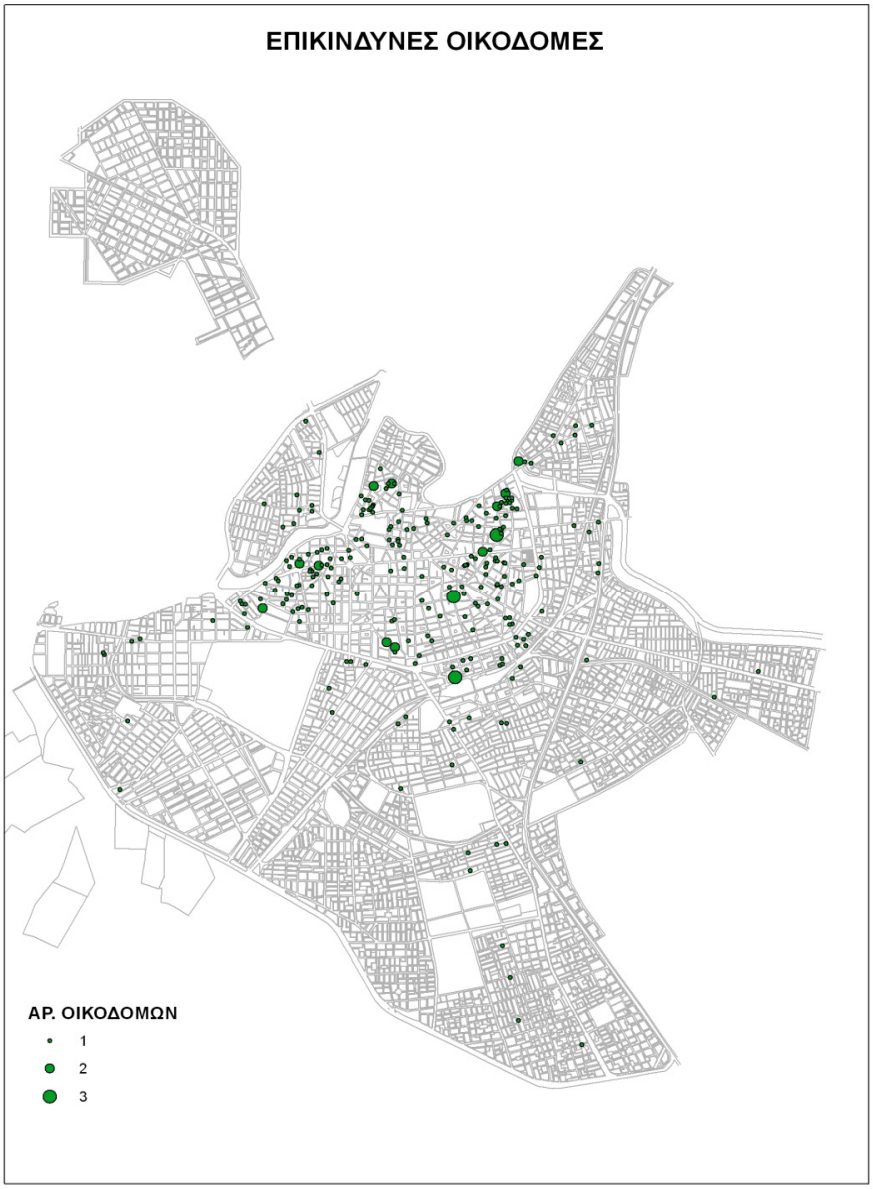

Fig. 2 The geography of the "dangerous" buildings in the city of Larissa.

and opened roads under the direction of the existing city plan, while a further 7% of them has also been opened but these are short in length and narrow roads—passages that end in a dead end. Empty plots account for 17.76% of the demolished dangerous buildings. Finally, with open public spaces, the 5.26% is connected and with buildings with commercial activity the remaining 3.29%.

However, the above distribution varies from region to region. For example, the construction of an apartment building with main use of "residence" ranges from 30 to 80%. The maximum price is found mainly in the area of "Agios Nikolaos", which means that it was preferred by private real estate agents/constructors mainly because of its proximity to the city center, i.e. proximity to retail markets and services, and location in the area of many school units of different levels of education. The "implementation and opening of roads under the city plan" ranges from 10 to 25% for the area of "Agioi Saranta". It is an area

that still has problems with the implementation of the city plan, since only 23% of it has been implemented, while the building stock is quite old [13]. Finally, the "empty plots" category ranges from 0 to 26.5% for the areas of "Agios Nikolaos" and "Agios Konstantinos" respectively. Results in this case also confirm the "preference" in the area of "Agios Nikolaos" as opposed to other areas of the city.

Therefore, the analysis shows the existence of many dangerous buildings in specific areas of the city of Larissa with prominent areas, those of "Agios Achillios" and "Agios Konstantinos". The first area, namely "Agios Achillios" is also the oldest district of the city. During the ottoman occupation the area was called "the great mahala" and it was extended to the west and southwest side of the hill of the ancient citadel. This Christian district was the first to be created in Larissa during the ottoman occupation, one of the few Greeks who remained in it. Throughout ottoman occupation, the district was a special parish centered on the metropolitan church of Agios Achillios. In his neighborhood to the north was the metropolitan residence and somewhere nearby the Greek school. According to a map of 1880 and based on the first plan of the City (1884) the boundaries of the district were, to the west, the right bank of Pinios, to the east the street "Polykarpou" and to the south "Venizelos Street" [14]. It is therefore an area with a very old building stock and, by extension, it is perfectly normal for a number of dangerous, closed and abandoned buildings to be found in it.

The area of "Agios Konstantinos" is completely different. It is a typical and traditional area of the city of Larissa, characterized by the usual problems of Greek cities: dense and unregulated construction, narrow roads, absence of open-green spaces, complete absence of green infrastructure and related buildings, incomplete tree planting and problematic traffic for both pedestrians and vehicles. However, it is an area with special and autonomous characteristics, since it is defined by strong traffic axes and creates a sense of center—remote and proximity—isolation compared to the rest of the city. The main use found there is that "residence", unlike the area of "Agios Achillios", where mixed uses are found. Single use buildings (residence) account for 90%, with the rest being mixed use buildings. Construction activity over the last 20 years lags slightly behind the city average. About 67% of the buildings are ground or two-store floors, with a fairly large proportion of them (42%) built after 1970 [15].

Last but not least, the area of "Agios Nikolaos" or "Paraschos Mahalas" during the Ottoman occupation has completely different characteristics. According to archival and related photographic material, important families of the city of Larissa at that time lived in this area, most of them in mansions (e.g. family of Protosygelon, Sakellaridis, Xyradakis). In the same area there was also the first Electrical Company factory, later known as WILL, as well as the surgical clinic of Vassiliou Papadimitriou, a building that later housed the Town Hall of the city. Similar archival material also claims that the "embassies" or similar structures were located in this area [14]. Therefore, this area has long been chosen as a place of residence and indeed for those of the upper social class.

5. Discussion and Conclusions

"Dangerous" buildings are traditionally seen as negative elements in the urban environment. They threaten urban sustainability, are related to urban resilience and are often the result of the economic crisis. On the other hand, however, they may be the starting point, perhaps even an opportunity to revitalize cities, providing new spaces available for urban uses, if demolished, and a stock of urban elements of specific characteristics, which can be used to formulate housing policies.

The analysis showed that the problem of "dangerous" buildings mainly concerns the central area of the city of Larissa, which is usually referred to as "historical centre". This result is in line with the

corresponding results of other surveys, both Greek and foreign, and obviously highlights the problem facing the cities of today and, by extension, urban planning itself: urban planning is now called upon, focusing on the human dimension, to exploit and implement the principles of sustainability, prioritizing the issue of upgrading central urban areas, improving this way the quality of life. Therefore, one of the main objectives of urban planning should be to halt the degradation of the city, in which "dangerous", "vacant" and "abandoned" buildings play a key role.

But why should urban planning give priority to the historic centre of a city? The answer is simple: the historical center of each city symbolizes its birth and its identity, enclosing the most interesting part of its urban fabric and brings together many important services and activities. The wear and tear of time and use that are subjected may cause grief to the resident but it is also the one that causes charm to the visitor. In the city of Larissa, few samples are now left of its historical center, due to natural disasters (e.g. earthquake), historical events (e.g. bombing during the 2nd World War) and development options (e.g. mass construction). What is left is now at risk of abandonment and inaction, and this was also shown by the findings of this work.

The work has shown that "dangerous" buildings exist in the city of Larissa and are a problem. The existing Greek policy on these is expressed through the already described institutional framework. The Municipality concerned is responsible for their fate and responsible for their demolishing if necessary, provided that a request has been made by a citizen. The effectiveness of the Administration depends on the completion of the administrative process and the designation of a building as "dangerous". The Public Administration (the Municipality) can not act in advance (without the citizen's request). What is provided for in the institutional framework is *ex ante* action only in the case of "urgent". In this context, the Administration's action in the case of Larissa is considered effective, in the sense of the exact application of the existing institutional framework. This covers the "letter of the law" and omits the risk of punishment which in matters of security is severe. In addition, these cases are left without further intervention. Therefore, the Administration can not plan, is not involved and can not have an "opinion" in their future exploitation, which is considered a private matter (a matter for the land owner), and does not formulate or implement any kind of policy.

However, what about the buildings which are not yet "dangerous", but are already "vacant" and with no active use, in the sense that the current "vacant" buildings in time $t = 0$ will probably be "abandoned" in time $t + 1$ and, ultimately, "dangerous" and to be demolished in time $t + 2$. There is no corresponding institutional framework for them. Their abandonment can and is usually continuous. There are no policies in place to counteract their negative impact on the urban environment, and, even better, to make a positive contribution to it. The comparison with the previous category, as well as the observed stagnation in providing a "modern" institutional framework, shows once again the Greek phenomenon of a hypertrophic institutional level and atrophy at the level of policy. The solution already proposed in the international literature is their permanent or transient integration into urban functions. Such a solution is obviously at the center of sustainability, and is also important for urban resilience. Recent research deals with the introduction of so-called "intermediate uses". The main problems of this approach are the management of security issues and the legal complications in relation to ownership issues. Can this solution be integrated into the existing institutional framework? The answer is no. "Intermediate uses" have a rather socio-economic and intangible content and objective and not an urban planning one in the way described by the existing Greek framework. In this sense they provide a solution to the "after" of the redevelopment,

i.e. to the indicative and future user of the site, who can of course indirectly indicate the type and scope of the intervention during the phase of urban planning. Furthermore, the solution of "intermediate uses" requires the conception and institutionalization of a new framework.

The Greek institutional framework tries to manage the "existing problem" (designation of "dangerous") but is unable to see and predict the "future problem" ("vacant" and "abandoned" buildings). There is therefore a deficit in terms of policy formulation as well as a relevant institutional framework towards this direction (intermediate uses). In any case, the management and exploitation of "vacant" and "abandoned" buildings are central if the target is developing sustainable and resilient urban societies.

Focusing on the case of Larissa and since this work has already highlighted but also proved the numerical and substantial problem with these buildings, future research could proceed as follows: first, with an on-site recording of the "vacant" and "abandoned" buildings for the city of Larissa (and the "rest" city, i.e. the expansion areas of Larissa); secondly, with a research on the ownership status of these buildings in the Land Registry, the Ministry of Finance and the central public Land Office. In this way the first answer can be given to whether the issue of "abandonment" that can lead to "danger" and, ultimately, demolition is due to multi-ownership and indifference or, alternatively, debt to the Sate because of excessive taxation, and, therefore, the inability to respond to the respective tax obligations.

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