Shelter City

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Abstract: The reality that invades us, unpredictable and until yesterday seemingly improbable, proves that history continues to be written according to the same rules that seemed obsolete. From an anthropological point of view, looking at our lives, the pursuit of resources together with the lack of empathy and education is a generating mixture for conflicts. The consequences of the immediate war neighborhood are being felt more and more strongly in the urban environment, through the influx of refugees who need shelter. However, some of Romania’s cities should soon solve the excess of existing shelter capacity. Initiating a strategy to establish the optimal process for shaping new poles dedicated to the construction of shelters will be able to prevent a possible major imbalance at urban, social, economic level. The paper aims to formulate criteria for the integration within a city of optimal locations for temporary shelters for refugees, as well as the necessary stages of preparing the population for acceptance and involvement. The originality of the study is due on the one hand to the previously unaddressed topic due to the unique moment we are in - end of the pandemic, beginning of the war, and on the other hand to the identified social peculiarities - people to whom the spaces are addressed: uprooted partial families, consisting only of children and women, traveling with or without pets. It is the opportune moment that, in a multidisciplinary architectural-urbanistic vision, the city to explore its panacea capabilities, through an empathic approach.

Keywords: war; shelter; city; social architecture; post pandemic city; community.

Introduction

This paper aims to analyze the situation facing Romania since February 2022, in terms of receiving Ukrainian refugees, in the absence of a space strategy for emergencies.

The absence of an adequate, adaptive and flexible infrastructure, strategically designed, safe and well equipped has raised questions about the ability of Romanian cities to respond to crisis or emergency situations.

This study prepares the general framework for planning and designing urban infrastructure for risk situations, in order to strengthen the urban body, its balance and its adaptive qualities.

The reality that invades us, unpredictable and until yesterday seemingly unlikely, proves that history continues to be written according to the same rules that seemed obsolete. From an anthropological point of view, regarding the way people live their lives, the search for resources together with the lack of empathy and education are a conflict-generating mixture.

The consequences of the immediate vicinity of an area at war are being felt more and more strongly in the urban environment, through the influx of refugees in need of shelter.

However, some cities in Romania should soon address the reduced capacity of existing shelters. The initiation of a strategy to establish the optimal process for outlining new multifunctional poles adaptable to emergency situations will be able to prevent a possible major imbalance at urban, social and economic level.

This study aims to formulate criteria for the integration in a city of optimal locations for temporary shelters for refugees, as well as the necessary steps to prepare the population for acceptance and involvement. The originality of the study is due, on the one hand, to the previously unaddressed subject, due to the unique moment we are in - the end of the pandemic, the beginning of the war, and on the other hand to the identified social peculiarities - the persons to whom the spaces are addressed: partially uprooted families, consisting only of children and women, traveling with or without pets.

It is the opportune moment that, in a multidisciplinary architectural-urbanistic vision, the city to explore its healing capacities, through an empathic and democratic approach.

A brief analysis of the situation Romania is facing lately as a result of receiving Ukrainian refugees reveals the need to build an urban strategy for sheltering refugees, to estimate essential needs, and to reduce the risk of imbalance in the functioning of the urban organism.
The war was and will be unexpected. Although the 21st century offers the premises for avoiding such conflicts, surprising human nature still determines seemingly unsolvable situations through communication or negotiation.

During this period, Romania is facing the vicinity of the war generated by the conflict between Russia and Ukraine. The felt effects, beyond the political level, affect the society deeply emotionally, which is easily visible by the immediate mobilization in the issue of refugee shelter, a social reaction that appeared spontaneously after the attack of Ukraine by Russia.

Romania is far from being able to find a solution to its own problems regarding disadvantaged communities, especially those in severe or extreme poverty, children's rights and last but not least the deficient infrastructure.

The reception of refugees has demonstrated previously unidentified needs, or sometimes identified and ignored, the lack of programs or infrastructures to ensure their takeover, guidance and shelter. In most situations, the cities required are the large ones, with traffic infrastructure, connections and facilities, either due to the fact that they are used as transitional spaces, or because they can withstand the additional loads generated by a considerable number of people.

The requests to which the urban organism must respond, as well as the way in which these cities can prepare for this situation constitute the main subject of this paper.

The theme was also approached at the didactic level. Thus, the students of the “Landscape Design and Planning” section within the Faculty of Urbanism of the “Ion Mincu” University of Architecture and Urban Planning were challenged to analyze in the city of Bucharest, certainly the most requested urban center of the country by Ukrainian refugees, opportunities to set up new temporary shelters.

**Literature review**

The geopolitical situation in the current context reveals the fact that Romania’s geographical position makes it directly witness to the recent events from the immediate neighborhood. The border with Russia, the Black Sea, Crimea, the borders of the EU and NATO contributes to the generation of a zone of tension in which our country is located, due to external expansionist tendencies and lack of dialogue.
The war that is now taking place near Romania’s borders clearly illustrates the interference of the geopolitical context at the level of decision-makers as a past, present, but also future fact.

The term “geopolitics” (Corneanu, 2013) belongs to Rudolf Kjellén, who used it for the first time in a lecture given in April 1899. Professor Kjellén attributed to it the meaning of “political geography”, according to the definition previously stated by Friedrich Ratzel.

Dr. Constantin Corneanu (2013) mentioned the dynamic character of geopolitics which, he states, is closely related to the variable character of the factors that constitute its object of study within the global political environment, which Prof. Ioan Conea calls "the political game between states". He also indicates that “The geographical position always remains the same, the geopolitical position is always different. The political face of the earth is a huge chessboard, on which the players always move the pieces, always giving them other positions and functions”.

**Fig. 1:** Russia’s “buffer zone”

The attitude of EU and Romanian citizens and officials, related to the influx of refugees, is found in the mobilization of organizations, volunteers, public administrations, as well as the measures taken.

The outbreak of war in Europe is without a doubt one of the biggest shocks of the last 20 years. The aggressiveness of the event has created one of the biggest humanitarian crises in the recent history of Europe. The bombings, the attitude of the Russian army, the violence forced a large part of the Ukrainian population to make the decision to leave the country, and determined an unprecedented solidarity, especially at the level of civil society, regarding the reception of refugees.

According to the European Parliament, "on 24 March, MEPs approved the Commission's proposal to redirect available funds to EU countries sheltering people driven by Russian aggression through the Cohesion Action for Refugees in Europe (CARE). An additional EUR 10 billion from the React-EU fund could be added to these funds - created as a
bridge between the Covid emergency measures and the cohesion funds” (News European Parliament, 2022).

As a result of the above events, the Temporary Protection Directive, established in 2001, was activated to provide immediate temporary protection in the EU to refugees affected by the war in Ukraine - Ukrainian citizens, non-EU citizens, stateless persons or persons with a residence permit in this country who will benefit from the same rights throughout the EU - work permit, residence, access to social and medical care (EU Council, 2022).


At the level of civil society, the mobilization was exemplary, despite the rather cold ties, of old smoldering animosities between neighbors, of old diplomatic scandals with various topics, including "treatment" of minorities and several territorial issues. Probably the reasons why they were left aside were the collective memory related to the atrocities committed by the aggressor in the past, the proximity of the conflict, as well as the humanitarian education.

The approximate data and estimates for the near future made immediately after the outbreak of the war have been exceeded. Thus, according to the UNHCR (United Nations High Commissioner for Refugees) report, in February 2022 it was estimated that more than 4 million people could have left Ukraine, arriving in the neighboring countries. In June 2022, an approximate number of 8,007,014 people were registered who crossed the country's borders (UNHCR, 2022). Of these, during March, approximately 600,000 refugees entered Romania, of which about 4,500 people applied for asylum. Poland, Romania and the Republic of Moldova are the countries that currently host most Ukrainian refugees, managing for the time being to manage their flow. One of the reasons is that many of the first people to flee Ukraine were those who had some financial comfort. The director of the UNCHR states "A large number of them arrive by car and, especially, they have relationships, they can go where they have family, friends, a community. But if the war continues (...) it is possible to start seeing people without resources and without relationships and this will be a problem that is more difficult for European countries to manage, more solidarity will be needed everywhere in Europe and beyond. of our continent to receive those people". So far it can be considered that the UNHCR director's estimates were correct (Cornea, 2022).
Methodology

The article proposes first of all an analytical approach, in order to identify on the one hand the general context, then solutions for similar situations and their applicability within the studied situation.

The paper is designed as an open study that aims to signal the necessary elements for the formulation of general criteria, parameters and variables that can be applied in different urban situations in order to prepare a specific infrastructure that is able to meet a degree high unpredictability caused by extreme situations.

The war situations on the other continents, the preoccupations of some humanitarian organizations, of the professionals in the field of architecture and urbanism offer an experience that will be used in this study.

RESULTS

Urban preparation of cities for sheltering war refugees. Standards.
The study identified the criteria that may underlie the construction of a spatial strategy for emergencies in an urban context:

a. Location criteria (urban, local schemes)
   a1. accessibility
   • easily accessible roads, served by public transport, related to the main intercity and international transport points (railway station, airport)
   a2. land area
   • land reserves capable of supporting the construction of new structures, or the expansion of existing structures, if necessary
   a3. neighborhood
   • land located in residential areas, to ensure a familiar, safe, non-aggressive, quiet environment

b. Functional criteria (organization schemes)
   b1. proximity of facilities
   • presence of commercial facilities, services, human and veterinary medical infrastructure, psychological help, education, public transport
   b2. functional needs
   • accommodation, medical services, banking, translations, telephony, internet, social assistance, playground, green spaces

c. Architectural criteria (identified examples)
   c1. capacity
   • variable, with the possibility of expanding if necessary
   c2. Image, materials, durability
• architects together with complex project teams (resistance engineers, installers, experts) must identify possible hazards related to the instability of the resistance structure or fire hazards
d. Estimated impact on the local, zonal, municipal urban context
• agglomeration of traffic flows, public transport, commercial facilities
  • need for additional means of transport, commercial supply
  • increased control of public safety
  • human or animal epidemics
e. Risks
  • overcrowding or traffic jams
  • increasing the phenomenon of infractionality
  • economic problems
  • location of shelters in places with inaccurate ownership
  • opposition from members of the community
  • conspiracy theories
  • whataboutism phenomena
  • accelerating the emergence of new pandemic waves
Mankind, unlike other life forms on earth, considers the act of living to have several valences, such as shelter from weather, fire, natural challenges or conflicts, but also having an important aesthetic load.
Things created by people become important to themselves only when they have been invested with certain meanings, beyond the role of utensil.
Thus, human shelters must meet the majority of users' needs, whether they are used in the long or short term. Man will appreciate the feeling of security that a solid shelter gives him, but he will always feel the acute need for it to satisfy his aesthetic sense.
Obviously, emergency shelters must respond mainly to the man's requirement to have a safe roof over his head. That is why it can start, as some of the projects developed so far suggest (Baranyk, 2017), with a roof, but the aesthetic side should not be ignored. The aesthetic side is what gives meaning to the shelter and contributes significantly to increasing the feeling of wellbeing.

Shelter City - presentation of the results of the didactic approach.
The subject was also used at the didactic level in a practical application within the Urban Landscape course, held at the Faculty of

Between April and May 2022, students were asked to conduct an unconventional exercise in studying the urban landscape, in the recent context we face in the immediate vicinity of what has the premises to become a global conflict.

The subject of the practical work is the effect of Russia's invasion of Ukraine on the urban environment of Bucharest. The context in which this issue arises is that of sheltering refugees, mostly in the short term, pursuing the imagination of urban, architectural elements and functional solutions and resources to help Ukrainian refugees.

Public and private accommodation has been provided in Bucharest, most of it during the pandemic and obviously useful at this time.

Students were encouraged to anticipate what will happen when these accommodation reserves are exceeded, how and where such temporary shelters can be organized and how they will affect the image and urban life.

The exercise proposed to students aims to prepare the Bucharest urban environment for such a situation, in order to avoid the chaos that may result. In this regard, the students identified optimal places for the construction of temporary refugee shelter structures, taking into account:

• location within the city, related to the traffic system, connections with commercial and health facilities
• availability of space for the construction of temporary structures for shelter
• the impact on the urban landscape
• the impact on urban flows
• influences on urban life

Each team of students identified at least one urban space resulting from the analysis and argued, in which scenarios of temporary operation were imagined in the case of the construction of such shelter structures for refugees.

For example, two student projects selected as a course application were selected - Temporary Shelter – student team Silvia Calea and Bogdan Leca, and Refugees temporary_permanently shelter – project made by the students Teodor Butoi and Dante Ionescu.

Project 1 - Temporary shelter, authors – students Silvia Calea and Bogdan Leca

Following the analysis, the students found that the challenges of providing housing for migrants and refugees relate mainly to:
• Lack of housing accessibility
• Lack of adequate information about housing alternatives
• Segregation in the urban structure
• Improper design

The alternatives provided by the state are often crowded, do not meet the needs of all categories of refugees and lead to a lack of privacy and security.

The design principles followed the modularity, scalability and flexibility of the shelters, in order to ensure comfort, social inclusion, socialization and feeling of home.

In the local context, the identified site is located in Bucharest, Sector 2, on Șoseaua Iancului, on the site of a former garment factory, with easy access to metro stations and overland transport.

**Fig. 2** – Analysis of emergency infrastructure related with the educational, recreational and commercial & services facilities in the studied area & Proposal of the functional zoning of the selected plot for sheltering refugees.

Source: [https://www.csis.org/analysis/russias-design-black-sea-extending-buffer-zone](https://www.csis.org/analysis/russias-design-black-sea-extending-buffer-zone)

It has been estimated that on the surface of approximately 2.2 Ha, 500 refugees can be received in approximately 22 2-level modular dwellings.

**Fig. 3** – Illustration of the ambiance and image of the sheltering assembly

*Image source: Hahn, 2022*
The site offers housing, public catering, cultural center and green spaces with playgrounds.

**Proiect 2 – Refugees tranzitory temporary shelter, authors – students Teodor Butoi and Dante Ionescu**

The students identified on the territory of the municipality of Bucharest a series of five spaces corresponding to two types of shelter considered necessary - transitory shelters, and semi-permanent shelters (temporary long-term). The selection criteria of the areas were the following: the proximity of the North Station, the proximity of the metro stations, the commercial type spaces and the public catering spaces.

![Location of the proposed areas related to the public facilities](https://www.csis.org/analysis/russias-design-black-sea-extending-buffer-zone)

Three areas were identified: Calea Plevnei opposite the Military Emergency Hospital, the intersection between Dr. Iacob Felix Entrance and Veronica Micle Street and the intersection between Ioan Bianu Street and Petru Rareș Street. These are proposed for the emergency assembly of mobile homes in a maximum of 24 hours.

![Spaces typologies for transitory or temporary shelters & Possibilities of organizing the shelters](https://www.csis.org/analysis/russias-design-black-sea-extending-buffer-zone)
The other two areas, located on the vacant land near Casa Radio in the Eroilor area and at the intersection between Splaiul Independenței and Strada Chimiștilor, contain constructions with a longer assembly period with the character of long-term temporary shelter.

In terms of comfort, students preferred prefabricated sustainable container-type homes with solar panels. The placement of the containers will be done so that there are common spaces for cooking and serving meals, toilets and showers, spaces for mother and child, outdoor or indoor playgrounds.

![Fig. 8 - Stages for assembling shelters Image Source: Block, 2019](image)

In the presented studies, several elements considered important at the level of the urban system were identified:

- **ACCESSIBILITY** - proximity of intermodal nodes or major traffic infrastructures (train station, public transport stations, major traffic)
- **FUNCTIONALITY** - proximity to commercial and health facilities
- **INTEGRATION** - proximity to living areas
- **MODULARITY** - the use of light structures, easy to assemble, extend and use
- **PSYCHOLOGICAL COMFORT** - provision of community spaces, assistance for guidance
- **FLEXIBILITY** - the subsequent integration of the proposed nuclei in the urban functionality, by adaptation or conversion

**Limits and discussions**

The Map of Europe provides rare case studies for shelters, for whatever reason (natural disaster, conflict / violence or other). Obviously, Europe was taken by surprise by this war. The problem of housing arises
and gives rise to the need to design and think of another type of urban infrastructure.

The issue of shelters for receiving war refugees could be viewed from several perspectives.

The first would be that Bucharest is far from having a sufficient number of civil defense shelters (from the data provided by ISU to the press in February 2022, out of 4538 shelters listed in Romania, 1694 are in Bucharest, with the theoretical capacity to house 322,194 of people)(Inspectorate for Emergency Situations "Dealul Spirii").

In January 2022, Bucharest had 2,161,842 inhabitants, according to INSSE. Thus, the shelters are insufficient and, unfortunately, mostly impractical due to the lack of maintenance of air intakes, sanitary installations and floods in the basements. The newly designed shelters should be located in areas where they can be accessed and used by city residents after they are released by the wave of refugees.

The second perspective refers to the fact that Bucharest is a city that has suffered, throughout history, a series of significant natural disasters. If the floods caused by Dâmbovița no longer present any danger following the regularization of the riverbed completed in 1998 according to AGIR (Stematiu & Teodorescu, 2014), the imminence of earthquakes remains present, Bucharest having over 2000 buildings in danger of collapse (PMB, 2021).

The role of architects would be primarily to centralize this data and to identify places that could meet the optimal criteria for the location of shelters.

Obviously, open public areas seem to be the easiest options to access in an emergency. However, they must not eliminate an in-depth study that will prepare the city for emergencies in the future.

Case studies according to UNHCR (Shelter Projects, 2021) reveal that, unlike the refugee recruitment by the community, which was generally very good, most of the weaknesses reported were related to the project itself. These include: lack of repairs and maintenance, lack of awareness of wider needs, lack of verification procedures, lack of financial support measures and implementation of a large housing project without a pilot construction. Lack of time for proper implementation, delayed decisions by local authorities, lack of understanding of how a household works, were the main problems that were reported.

The theme of "shelters" has been studied more in terms of shelters formed as a result of natural disasters. Most of the refugees were in transit and by the end of the war we expect new waves of refugees. If the first to
pass were people who belonged to the middle class, with material possibilities and without major traumas, the data in the field show us that as the war continues we expect refugees to come without material possibilities and with major traumas.

The challenges will not be limited then only to the identification of the spaces, but also to their acceptance and integration by the society.

Conclusions

Understanding the situation leads to the conclusion that the city needs a responsive system for risk situations or disasters, an adaptive system that can respond to a variety of unforeseen events - war, natural disasters, pandemics. This system needs to be thought of both on an urban scale and on a detailed scale, understanding the importance of efficiency and modularity in such situations. It is possible to consider in this sense the provision of some structures built with temporary or permanent character, which have the capacity to be easily transformable and used.

The study on how the city of Bucharest responded to housing requests during February - May 2022 reveals that, in the absence of a specific plan or infrastructure, the city used existing reserves - either from its metropolitan area or made as a necessity to pandemic COVID 19. Spaces have been shown to cover housing needs so far, but problems remain related to social availability, road infrastructure and public transport, communication.

The current situation obviously disturbs the usual parameters in which architects imagine and contribute to the development of the built environment by drawing projects according to design themes, teaching architecture to other future architects, writing and theorizing how to design more beautifully, better, safer or more creative. The point of view of the architects regarding the help of the communities in difficult situations is inconsistent and not very sonorous. However, in conditions of humanitarian crisis, architects can intervene and express their human side by helping to create living spaces, thus contributing to saving lives, looking for a way to architecture that can heal trauma and help recover lives, or of destroyed communities. Architects and urban planners can find coherent solutions for urban planning for emergencies, they can also discover revolutionary technological solutions using local or affordable materials and they can discover innovative solutions to save energy. Unfortunately, at present architects contribute to less than 3% of projects on the built environment (Dickinson, 2022).
Community building projects, quite rare, have shown that architecture can simultaneously help rebuild homes and communities.

It is the moral and deontological obligation of architects to provide shelter that respects the human dignity of communities in difficult situations. Architecture schools could be involved in this process, giving students the opportunity to design shelters, under the direct guidance of experienced architects. The didactic experience of this kind brings an awareness of the subject and a sensitive, human involvement, a step forward in the education of urban design and architecture (Parsloe, 2020).

Emergency architecture involves working directly with and for communities in extreme situations, the use of local materials very easy and fast to procure, the application of fast and cost-effective technical practice.

Everyone needs a decent shelter, which greatly reduces the emotional tension accumulated after the trauma. Rediscovering the feeling of "home", even if it is temporary, is essential for people and their quality of life. Initiative groups that help refugees and that mobilized spontaneously, long before state institutions, need design experience that seeks to implement that feature that can turn a living space into a "home".

Acknowledgments

The subject was also used at the didactic level in a practical application within the Urban Landscape course, held at the Faculty of Urbanism of the “Ion Mincu” University of Architecture and Urban Planning, “Landscape Design and Planning” section.

A very important aspect of the research is the didactic approach and the implication of the specialists in the concrete aspects of the emergency situations. Raising the problem of the inexistence of an urban infrastructure able to answer and take over in real time and efficiently the issues generated by a conflict or calamity, represents a moment of awareness both on social and professional level. The way the students answer to this kind of subject illustrates not only the humanity, but also the wish and the interest to actively act and to use the knowledges assimilated through the specific education in the fields of urban planning and architecture, applying these knowledges in the emergency situations.

References


