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RAPID RECONSTRUCTION (POST-DISASTER -WAR) AND ITS IMPACT ON REDUCING LIVING SPACE AT RESIDENTIAL HOUSES IN KOSOVA

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Abstract:
Being exposed to a disaster and to destruction sometimes as an association part of a disaster, the reconstruction process is a huge need after a disaster. By considering responding to all human needs (shelter, food, etc.) reconstruction is a process that will be associated with several processes that will end up with consequences that in some cases are uncorrectable. The paper aims to present the impact of the reconstruction process implemented by humanitarian organizations and the consequences of the reconstruction process that will not consider living space values and heritage aspects at the reconstruction site. The paper aims to present the experience of the Kosovo War (1998-1999) that ended with the massive destruction of 250000 residential houses The reconstruction process was led by the United Nations Mission in Kosovo (UNMIK) and the contribution of many international organizations and United Nations (UN) agencies that tried to rebuild all damaged infrastructure and residential buildings to restart a new life in Kosovo. Reconstruction after the disaster supported by an international organization in Kosovo was welcomed as Kosovo was not able to recover all damages after the war, but this process did influence and change residential buildings by reducing living space, transforming a heritage aspect of living conditions and buildings and by giving a people physical structure but not emotional feelings called “Home”

Disasters, as unplanned and unwonted challenges for society, are associated with unpredictable emotional and physical destruction. Disasters, depending on the level of damage and type of disaster, can enable the normal function of the community and sometimes exceed the community's capacity and resources to cope with the consequences of a disaster. Mankind did face two types of disaster based on what factors cause a disaster:

- Natural disaster
- Manmade disaster

Disaster caused by the nature (Earthquake, Flood, Tsunami, Tornados, Hurricanes (same as Tsunami), Cyclone (same as Tsunami), Snowstorm, Landslides, Drought, Electrical storms, Snow slides) are disasters due to forces of nature.

Manmade/Human–caused disasters (Terrorism, Sabotage, Viruses, Hostile code, **War,** Theft, Arson, Loss of Power supply (both electric and gas), communications links, Data, Cyber-crime (many types)) are planned disasters caused by humans.

Disasters, depending on the type, can have a society's attention and contribution, but there is not much to do or impact on happening phenomena in natural disasters apart from avoiding or reducing their negative effect, compared to human-caused disasters that can be avoided through preventive approach, positive approach and sometimes by on-time reaction.

This paper's focus will be on manmade disasters living space reduction and heritage of living concept and residential typology. The reconstruction after the manmade disaster in the Kosovo War in Kosovo in 1998-1999 was a human-made disaster that, a part of human lives, destroyed a lot of buildings Kosovo-wide. The consequences of this disaster left a huge number of residential houses destroyed during this period, around 250000 leaving 1 million people without residential space. The paper focuses on the architecture of residential houses, living space reduction, and architectural heritage of the living space, standards, and traditional way of living.

This research is a compression of the living space of residential houses and reconstructed space that each family got after reconstruction as well as a calculation of the difference between residential space before the war and after the reconstruction period. Data are collected by the housing committee at the municipality and the organization that did the reconstruction. The general rules of reconstruction mainly were set up by the reconstruction organization as the UNMIK administration which did not set up any specific rules for reconstruction that the organization has to follow.

The war destroyed physical residential buildings and everything that was related to the way of living, including architectural and social heritage (traditional houses and traditional way of living). The reconstruction rapid approach did not consider architectural heritage at residential houses in Kosovo as well as living tradition heritage (the traditional way of living) that influenced living tradition memory. The importance of architectural heritage is explained by several authors Vitruvius explained the origin of architecture as *Firmitas* (Strength) *Utilitas* (utility) and *Venustas* (beauty) Ruskin for architecture claimed that it presents the spirit of a human, testifying to their identity [4], through the time also many researchers give the complexity process of architecture until the building come to life. Therefore reducing the architecture just for the needs of the client will not make visible and understandible the process of design. In this regard the great interest in the past is considered mostly in Renaissance times, focusing on ancient Roman architecture with what remained so it appears a new era in architecture approach. This study focuses on architecture mainly with vernacular values. Although below are shown the statistics, in this regard the essence of the built heritage needs to be analyzed too as the social transformation reflected in the buildings. At this case the rapid need to reconstruct may have neglect the culture, tradition and the way of living in a certain period of time and in specific suburbs.

Reconstruction process of residential houses

Like every country and nation, Kosovo, after a war faced big pressure of creating a sheltering program for over 1 million inhabitants who were turning back from neighboring countries without any return plan and without any sheltering organized by the United Nations Mission in Kosovo (UNMIK). International organizations contribute through their organization

(Government Organization GO and Non-Government Organization) and through different international agencies (UNHCR, UNICEF, UNDP, etc.)

This paper aims to present the way that reconstruction reduces the comfort of living space at the residential house by being in a situation of big need for emergency reconstruction of residential houses. Comfortability reduction happened not because of a lack of expertise, but because of the emergency need for shelter and reconstruction of living space and because of the lack of economic potential of households to influence the reconstruction of their future living space.

The disaster war (Kosovo conflict) in 1999 destroyed nearly half of Kosovo's 250,000

housing stock that was a physical and emotional loss in some cases unrecoverable. An assessment made in July 1999 by the European Commission indicated that 41,000 houses were partially damaged, 32,000 were seriously damaged (walls standing but roofs and interior burned), and 47,000 were completely destroyed (down to and often below the foundations). The houses of an estimated 500,000 people were badly damaged or destroyed, with these people consequently being made homeless. Emergency efforts by ECHO (European Commission for Humanitarian Aid Office) and other donors before the winter of 1999-2000 provided shelter for the worst affected families who could not move in with relatives. They were housed in partially repaired houses, temporary tents, pre-fabricated units, and collective centers. EC TAFKO (European Commition's Task Force for the Reconstruction of Kosovo) commenced a major rehabilitation program in 1999 to assist Kosovars in the rehabilitation of some 3,600 war-damaged homes, and this was taken over by the Agency in 2000.

After the disaster reconstruction strategy

Based on the assessment of the level of damages and consequences, the construction strategy prioritized the worst affected families, mainly houses totally destroyed and without roofs, and any possible reconstruction during the sheltering program as an emergency based on UNMIK Housing Reconstruction Guidelines. The guidelines had been developed in close collaboration with United Nations Agency staff, and local and international representatives, and ensured that the most vulnerable families received the appropriate sheltering and housing assistance in relation to the amount of damage from the disaster. Involvement of local community The reconstruction program was facilitated by giving a lead role to the Municipal Housing Committees which had been specially established in every municipality that was more destructed by the disaster by encouraging a 'self-help' approach with the beneficiaries, as well as generating value for the local economy by contracting local traders for the supply of construction materials. The international institution encouraged local professionals and skilled laborers to be involved at the reconstruction process to make possible continuation of construction tradition and generation of economic value for households were also used by the EU NGOs which were responsible for the implementation of the program.

The damage to residential houses was evaluated by guidelines created by local and international experts. Scanning of damages and assessment of destroyed houses was done in accordance with guidelines that all destroyed residential houses were categorized into 5 categories based on level of damage.

This categorization was done in the following scale:

- **Category 1** determines the level of minor house damages (houses with small damages such as doors, windows, and inside inventory)
- **Category 2** determines the level of small house damages (houses with small damages such as doors and windows, floor, inventory)
- **Category 3** determines the level of damages as in categories 1,2 and some damages in the plastering and walls (houses with small damages inside and outside building as some part of the walls, a small part of the roof but main construction still makes it possible to do repairs)
- **Category 4** determines the level of big damage but still repairable (houses with considerable damages in walls, roof, and floor, but still possible to rebuild-repair in the same structure as main construction still remains in good shape and condition.
- **Category 5** determines almost complete damage to the house (not repairable house)

Category 1-4 houses were reconstructed in the same house construction structure and almost all households received the same size of the house and the same residential house. Category 5, which is the focus of this paper, was impossible to reconstruct the same size of the living space and in these cases, households received the minimum living space that used to have before the disaster.

Reconstruction of residential houses usually was not possible in the same place and in most cases not in the same size. After the disaster usually, there is no economic potential for inhabitants to rebuild residential houses with the same format and same comfortability.

Below are analyses of the Category 5 houses in two municipalities in Kosovo (Istog and Prishtina) that were not exposed to the same level of destruction and reconstruction was implemented by different organizations with almost the same guidelines application.

RECONSTRUCTION –CASE STUDY ISTOG

As most of the cities and villages were destroyed during the war, Istog was one of the most destroyed by all means, including residential houses as well. The municipal construction comity led by the United Nations Mission in Kosova (UNMIK) organized a weekly meeting with all parties involved in residential house reconstruction. Every Non-Government Organization and Government Organization GO that has been involved in the reconstruction of category 5 houses was presenting to the comity which kind of houses they are going to reconstruct for local inhabitants.

As in the field have been operating many NGO-and GO reconstruction process was not under control referring to the size of living space and quality of building influenced by several factors such as lack of professionals, lack of funds, lack of building materials in Kosova and a huge need of inhabitants for sheltering.

The NGO that was part of the reconstruction, including the author of this paper, was Caritas Austria which did reconstruction of more than 250 houses in Istog and the same number of houses in Prizren. The Author of this paper was engaged in the whole project of reconstruction starting from design, materials, reconstruction, and new construction of the residential houses.

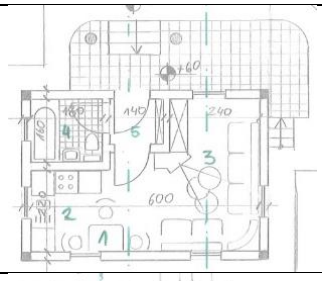
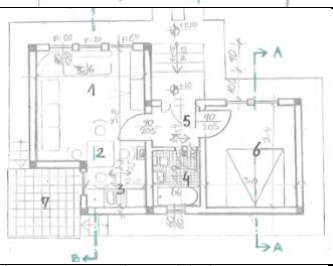
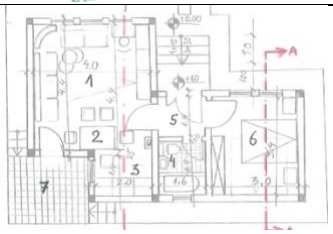
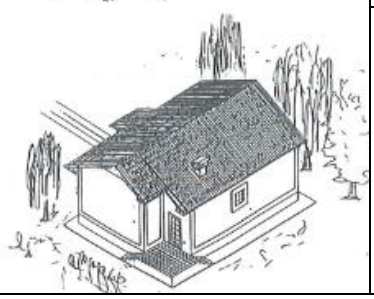
Caritas Austria, a part of the reconstruction of category 1-4 on the year 1999, reconstructed category 5 houses in the year 2000 and managed to apply some standards in order not to provide big houses for small families and not small houses for big families as some organization did one type of house for any kind of family size. In this regard, the following standards have been approved by Caritas Austria management, local experts, architects, technicians, and local representatives:

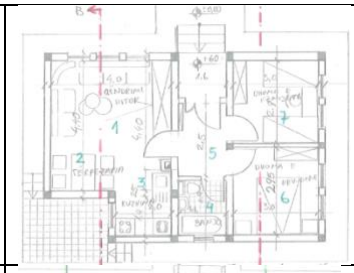
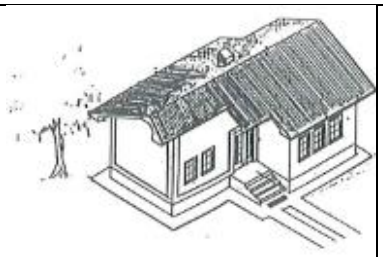
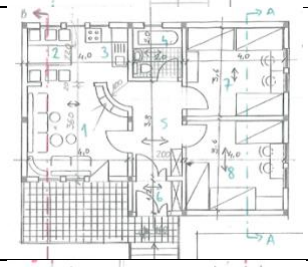
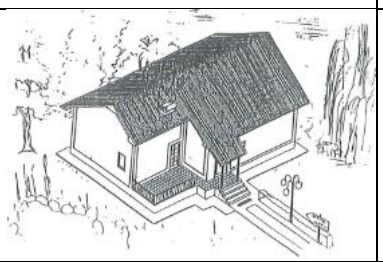
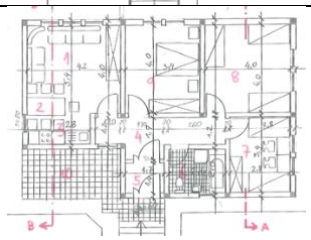
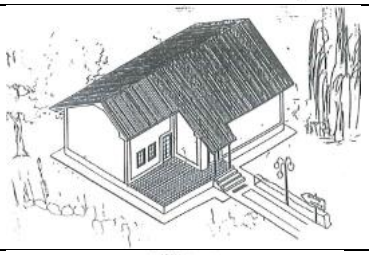
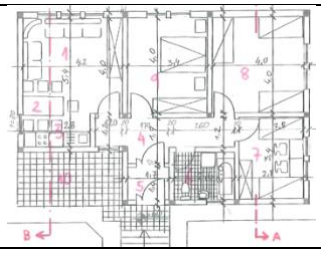
12 m^2 for every household and 8 m^2 for every family member

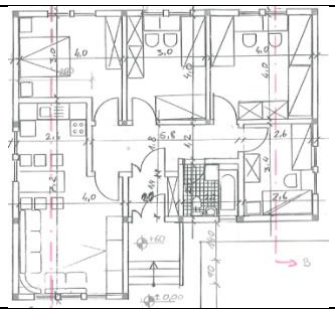
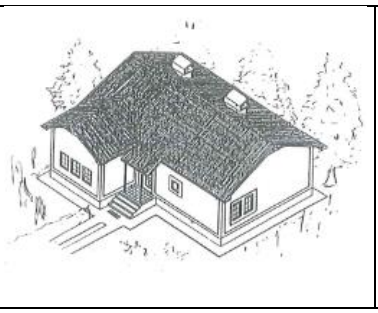
- House for 1 person -21.76 m^2 (12+8=20)
- House for 2 person -32 m^2 (12+16=28)
- House for 3 person -36 m^2(12+24=36)
- House for 4 person -45 m^2 (12+32=44)
- House for 5 person -51 m^2 (12+40=52)
- House for 6 person -60 m^2 (12+48=60)
- House for 7 person -66.8 m^2 (12+56=68)
- House for 8 person -76 m^2 (12+64=76)
- House for 9 person -85 m^2 (12+72=84)
- House for 10 person -92 m^2 (12+80=92)

The following table 1 present the types and surface of the reconstructed houses

Table 1: *Types and surface of the reconstructed houses*

1.			1 person 21.76 m2
2.			2 persons S=32 m2
3.			3 persons S=36 m2

4.			4 persons S=45 m2
5.			5 persons S=51 m2
6.			6 persons S=60 m2
7.			7 persons S=66.8 m2
8.			8 persons S=76 m2
9.			9 persons S=85 m2

10			10 persons S=92 m2

Source: Create from author

The above-presented house models and size of the houses were not equal size with their previous houses of category 5 that were destroyed during the war. Part of the surface, households did not receive as well the same format house that may remain households in their "dead house". To some houses and families, the newly reconstructed family house was half (sometimes even less than half) of the surface of their destroyed house. Therefore, in most cases, the reconstruction of destroyed houses reduced the living space and comfortability that families used to have before the war.

PRISHTINA

Another case study analyses reconstruction in the surroundings of Prishtina and this reconstruction process shows the reduction of living space after reconstruction was over. Based on data taken from the Directorate of Urbanism in Prishtina following are the dates of categorization and surface destroyed during the war.

Category I - 249 houses (10.15%) with a total surface of 27,268.00 m^2;
Category II - 308 house (12.55%) with a total surface of 37,117.00 m^2;
Category III - 672 houses (27.38%) with a total surface of 86,431.30 m^2;
Category IV - 1225 houses (49.92%) with a total surface of 127,235.00 m^2;

Organizations in Prishtina reconstructed category 5 houses based on 4 types of houses without having categorization by family members that family has. The below table presents some beneficiaries for the Category 5 houses, the surface of rebuilt houses –living space, based on the number of family members, reconstructed houses had the following size of living space. The table shows (shortly as a sample, not total data) how much reduction of living space and compression of house size before and after the war.

- 50 m^2
- 70 m^2
- 75 m^2
- 90 m^2

Table 2: *Household-owner before and after reconstruction*

No.	Name/Surname of Household-owner	Surface of the house before reconstruction	Surface of the house after reconstruction
		m^2	m^2
1	Hazir Ramiz Haziri	230	69
2	Ramiz Zejnullah Ajeti	182	73
3	Ragip Zejnullah Ajeti	182	73
4	Hamza Shaban Emini	215	90
5	Nexhmedin Emini	225	90
6	Hashim Shabani	155	50
7	Safet Ragipi	140	50
8	Jalil Muharrem Sokoli	250	70
9	Izaur Ismaili	320	75
10	Ruvije Nebesaqa	150	50
11	Xhemajl Dalipi	200	74
12	Shahe Krasniqi	265	75
13	Sabile Kongjeli	270	75
		2784	914
	Reduction ratio of comfort expressed in m^2		1870
	The reduction ratio of comfort expressed in percentage		67%

Source: Create from author

Conclusion

The above analyses show that after every disaster, reconstruction usually brings a reduction in the living spaces and comfortability of households. The disadvantages of reconstruction after the disaster in Kosovo were the high demand for shelter and limited time and resources to respond to this demand.

1. Considering very important, Household in Harry to rebuild their resident houses need to closely cooperate with the donor community, local and central government, and experts that create a strategy (emergency strategy) for the application of existing

standards related to the living space of the country, or international standards, and create the possibility for further extension of the residential building.

2. The reconstruction process, is very necessary, after every human-caused disaster, respectively in cases of governance change, the donor community should be led by a group of experts that will create a roadmap and clear reconstruction standards based on local standards, if exist, or apply standards that make possible to the household for recovering their living space and create a good basement for future recovery of their commodity that they had, and lost, during disaster.
3. Architectural heritage and living heritage should be considered in the reconstruction strategy of the post-disaster country and should be treated based on local (if existing) or international organization standards for heritage.

4. Not only reconstruct what was destroyed, but consider rebuilding a house in a format that can integrate the modern concept of energy efficiency by using local materials and concepts, and just, if necessary, import building materials that cannot be found in the region.

Recommendation

- Set up clear reconstruction strategy and rules by respecting local and international standards for residential living space.
- Focus on the heritage of residential buildings (form, material, design)
- Involve the local construction community (architects, civil engineers, local workers, etc.) in reconstruction to maintain the continuation of the construction of residential buildings.

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