

## PREFERENCES AND PERSPECTIVES OF SUSTAINABILITY IN INFORMAL ROMA SETTLEMENTS

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**Abstract.** *The intent of the article is to highlight the fact that Roma micro-environments contain as part of their context certain social and cultural premises, embodied in spatial forms and informal settlement construction manners that all together correspond with the principles of sustainable architecture.*

*Methodologically, the article begins with the idea that the informal Roma settlements were built by the Romani, without an explicit professional influence and represent a quality induced by the need to functionally organize a community where everyday activities take place. Hence, the physical entities and the construction techniques in the settlements are the objects of research on knowledge and skills of a community in which the individuals are connected horizontally and hierarchically and can thus achieve positive relations inevitable for such realization. In that manner, it is possible to systematize inside a settlement a base of characters of physical structure as completed individual and group knowledge and potentials for further, acceptable advancements in that area of construction.*

*The purpose of the paper is in drawing the attention to very concrete resources of the Roma community which should, with a gradual increase of capacities, be taken into account during the realization of the projects themselves and during the organized self-build and self-help processes as well as the process of housing condition advancement in the settlements. In a broader sense, the reduction of cost for the Romani has the potential to reduce a social distance towards them, especially in the Western Balkans where a significant portion of the population faces the same financial limits when it comes to housing advancement.*

**Key words:** *Romani, informal Roma settlements, culturally adjusted environment, sustainable architecture resource, knowledge and skills, physical structure characteristics, self-build*

### 1. INTRODUCTION

Roma settlements have been part of the city of Belgrade's urban tissue for decades. Even though the Romani people's housing problems are visible in everyday life, it was not until

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the involvement of the international non-governmental sector that the problems Romani face in fulfilling their rights to housing was mapped out. The practice of resolving the housing issues of socially endangered Roma people is a process in the making and is being created through a constant interaction of the theoretical and the realistic frames. The practice represents the basis for learning and developing the choice of future activities and initiatives, recommendations and lessons. At the institutional level, resolving the issues of socially endangered Romani housing is made even more difficult by the circumstances of the broader social context. The housing sector in the Western Balkans withstood (and still does) reforms and structural changes as a result of transition from socialist governmental structures into market-oriented economic structures. Mina Petrović points out that the weakened institutional and legal governing framework along with a lack of funds led to the issue of illegal and informal housing which particularly negatively affects the endangered social groups, including the Romani, but also the rest of the society (Petović et al, 2012:22). This led to a shift from uniform solutions and only using public sector resources in the approach to social and housing policy with the goal of increasing the availability and the affordability of adequate housing solutions. The methodological framework of the planning strategies turns to community resources. Thus, it was noticed that inside Roma settlements in Belgrade studied by the author of this article since 2011, certain entities exist as part of the settlement construction process without professional supervision and represent built expressions of knowledge and skills of families and the community, which represents the basis for future acceptable improvements in the domain of sustainable housing.

Generally speaking, the concept of sustainable housing is based on the recognition of multiple functions of housing and the tendency to hold its environmental, social, cultural and economic aspects in a continuous, harmonic interaction that benefits the inhabitants.

Even though the establishment of such principles is theoretically vast, in practice it primarily deals with the local level, as every community has different social, economic and environmental needs whose parameters remain unique in constant change. In the case of the Roma population, the subject of housing is additionally made even more complex due to the subtext of appreciating the different; such subtext becomes a certain imperative because the current documentation dealing with the integration of the Romani is based on the theoretical model of integration. This means that all projects regarding the Roma population including housing projects need to emphasize the preservation of the ethnic and cultural identity of that community.

Through the overlapping of the two functions of housing – the physical and the social – the meaning of the term territorialization is also broadened. Therefore, the places claimed by the Roma cultural group are not only spatial facts, but also cultural, social, economic and ecological, and as such, as explained by Gupta and Ferguson, make possible the understanding and analysis of what different cultural groups create in space (Gupta & Ferguson, 1992: 7). The understanding of sustainable housing is thus changed from green units, which might be the primary association to a social enhancement in a much broader sense.

Romani studies and sociological research find that the Roma microenvironments represent the most reliable form of protection of the cultural identity of the Romani; and even though it changed dynamically, it preserved the social and cultural behavioral patterns – the Romanipen – which still hold a key role in the everyday life of the Roma people (Raykova, 2003: n. pag; Basic, 2010: 14). What actually qualifies the informal Roma settlements as spaces of significance is the fact that the Romani themselves shaped them and

formed them based on the needs of everyday life, and without the involvement of professionals. According to Eagleton, the lifestyle of every cultural group holds a complex set of cultural values, traditions, habits and beliefs (Eagleton, 2000: 34), the Romanipen being exactly that for the Roma people.

In that sense, several concepts of physical structure were noticed in various slum-type informal Roma settlements analyzed by the author of this paper from 2011 to 2014 in Belgrade and Serbia. Except for minor variations, the concepts are principally the same for all investigated settlements and can be considered as culturally adjusted environments. Seamlessly achieved principles of sustainable architecture as well as the potential for further acceptable improvements in the domain of environmental, social cultural and economic dimension of housing sustainability are integrated into such settlements.

## 2. COMMUNITY SCALE: SETTLEMENT PATTERN AND SUSTAINABILITY

In an environment of economic poverty and outside of the usual social systems, under the circumstances where Romanipen-based behavioral patterns dominate, the lifestyle and behaviors of occupants have developed as predominantly collective. Based on numerous academic observations, Walter Weyrauch and Maureen Anne Bell emphasize that the determination not to assimilate with the dominating societal groups was key to the preservation of the Romani as a special entity because the Roma community managed to keep and still keeps many of its traditions (Weyrauch & Bell, 2001: 29). As found by Raykova, the pattern of family, as one of the primary Romanipen values which includes the extended family – *endaj* – and the brotherhood pattern also known as *Phralipen*, is characterized by a strong leaning towards a collective lifestyle as a synonym for the protection and security which are in the Roma culture considered far more important than the individual way of life which is thought to lead to insecurities (Raykova, 2003: n. pag). This pattern had a key role in the forming of a housing subsystem of grouping units and treating open spaces. In other words, the code of the collective lifestyle defines the base conception of the physical and social structure that actually represents the basic unit of a settlement noticed during the researching of the slums – the Yard Object Group.

The on-site analysis of three informal Roma settlements in Belgrade, Serbia – Laudan's Moat, Grmec, and Blok 72 – helped determine several characteristics of the Yard Object Group. The analysis was methodologically conducted as a Case Study that included week-long observation of the lifestyle and habitation of the members of every community and conversation with them.

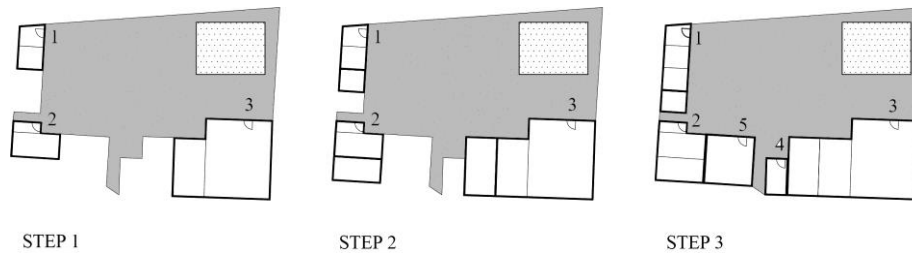
The Yard Group is a semi-atrium-like formation made up out of 5 to 7 housing units that surround an inner courtyard. This specific socio-cultural micro ambience showcases the most visible characteristics of Romanipen – e.g. the familial ties, the regard towards children and the elderly – which make possible the mutual support in fighting everyday challenges, such as taking care of the young children, collecting secondary resources or sharing knowledge and skills regarding building and fixing homes.

Over 30% of the area of the courtyard surrounded by the Yard Object Group is used for storing secondary resources. The storage is located in a single place inside the Yard Object Group and is used by all the inhabitants of the Group which shows how the collection of secondary resources represents a mutual activity that primarily concerns the micro community and less importantly the individual.



**Fig. 1** Schematic view of the Yard Object Group and detail of atmosphere

The genesis of the Yard Object Group is directly influenced by traditional family relations where the expansion of a family requires an expansion of the house rather than the creation of a new home: the Romani tend to create the extended family called *endaj* in which three generations live under the same roof. A new house is formed with the appearance of the third degree of kinship. The author of this paper found that the final look of the Yard Object Group comes into being in stages. The first house is formed in one part of the designated space and it usually consists of one main room and a possible addition one. With the extension of the family, another room is added as an extension to the main room of the existing structure. With the later extension of the family, new main room is formed with a separate entrance. The new living unit is later also expanded in stages. It so happens that all the inhabitants of the yard group are thus related.



**Fig. 2** The forming of the Yard Object Group

In the discourse of social and cultural sustainability of housing, the Yard Object Group actually represents a third skin which, exactly like human skin or clothing, has the role to protect and enable a small amount of communication with the surroundings. Solidarity, as the primary relation inside this micro ambience is then translated onto the whole community. The functional integrity of the Roma community depends exactly upon the inner Yard Object Group, and the familial ties inside it (both hierarchically and horizontally, among hierarchically equal members) actually reflect the positive relationships in the community which, according to Ancell and Thompson-Fawcett, are considered the ultimate needs in the social sustainability of housing (Ancell & Thompson-Fawcett, 2008: 438). This potential therefore needs to represent the resource which will provide material for future action and decision-making regarding city-scale topics about slum upgrading, redevelopment or re-design into city neighborhoods.

The collective spirit achieved here at the social level also brings results in the environmental and economic dimension of housing sustainability at an even smaller sample – the process of building the single house.

### 3. HOUSE SCALE: BUILDING AND SUSTAINABILITY

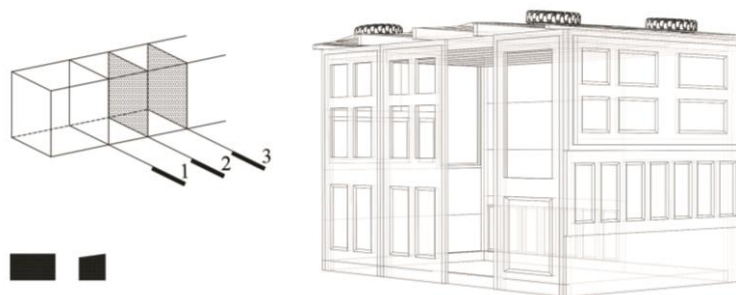
In informal Roma slums, the population is extremely poor and in 80% lives in dilapidated homes and in 20% lives in solid homes. If we also consider the fact that the primary activity of the community is the collection of secondary resources, it makes sense that the homes are built using waste materials which often are the only materials available. The construction type, the choice of materials and the building process of the homes were determined through on-site analysis directed towards the exploration of housing units in slums Blok 72 and Landfill in Belgrade, Serbia during 2014.

Analysing the materials created based on field explorations of informal Roma settlements led to a conclusion that houses in Roma settlements can be divided into two basic types:

- Weak (temporary) houses (in terms of building material durability)
- Solid (permanent) houses (in terms of building material durability)

#### 3.1. Temporary house

**Main characteristics.** A temporary house is a house built using non-standard construction materials, most frequently waste materials. Slum inhabitants call their houses ‘barracks’ whereas the term ‘kartonka’ (lit. *cardboard house*) is used in colloquial, everyday communication, as to refer to housing built from cardboard and other non-construction materials (thus came the slang nickname for slums – ‘karton siti’ (lit. *cardboard city*)). Even though it is hard to precisely determine, the usual basic construction of the temporary houses is made out of wooden beams or planks, although there are cases where it’s made out of steel or concrete. The materialization around the base construction is achieved with coating using wood boards, doors, waste nylon foil, waste sheet iron or cardboard. Roofs are shed or gable roofs, with low slopes. The roof cover is placed on wood boards in the direction of the roof slope. Waste nylon foil, cardboard, sheet iron, cane as well as waste asbestos plates (formerly used for covering, now discharged because of the effect asbestos has on health). Floor is bare ground with cardboard or Styrofoam covering. After forming the outer layer, the house is equipped from the inside by linen and textile coverings, making the whole interior look like patchwork. The temporary house therefore represents – a secondary



**Fig. 3** Temporary house

architecture – a house from waste resources which is never larger than 15 square meters due to its structural capabilities and materialization, and is always up to 1.8 meters tall. This height also determines the volume of the house, which is usually around 30 cubic meters, and is easier to heat in the winter; the height also makes it easier to fix the roof if necessary.

**The house-builder and building a dilapidated house.** The builder of a temporary house is the most skillful ‘architect’ in the settlement, but often someone from the nearby Roma settlements is called upon. According to the conversations led by the author of this paper with the inhabitants of the abovementioned slums, the head ‘barrack’ builder is the one who is “the most adept in basic construction work with wood and iron sheet and who knows how to best combine bus doors, car windows, wooden jambs, waste wood, cardboard, iron sheets and tires”, but “everybody helps him”. The construction of the new house is charged for. The settlement’s architect must work quickly and if the householder turns out to be a good assistant, the house may be built within a day. The neighbouring house in the settlement never abuts the existing one, but an aisle of minimum 1m in width is left between for quick repairs and alterations, i.e. remediation. The inhabitants themselves execute the replacement of elements on the roof, walls, and floor. Besides the remediation, the annexes and adaptations may be done as well after the construction of the house. The field research has shown that expansions of the house, i.e. annexes and adaptations, are a permanent on-going necessity for the residents, generated as a response to the adaptability to the transformation of the family structure. The construction of the barrack happens in stages and it grows along with the expansion of the family. Because of the initial lack of space, many rooms of the temporary house are constructed subsequently. The annex is most frequently a room of about 10 square meters in area. The annex and the adaptation of a temporary house are done by residents themselves with possible help from relatives and neighbours.

**Table 1** Different forms of temporary house construction as interior community capital

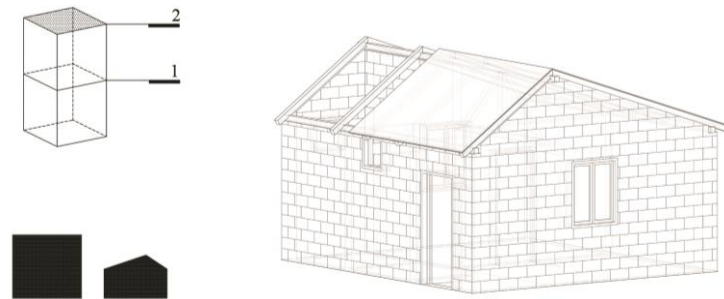
	Practical partaking in house construction		
Construction ‘Architect’	Room addition	Adaptation	Remediation
Family	Family	Family	Family
Inhabitants of the Yard		Inhabitants of the Yard	
Object Group		Object Group	

With regards to self-build and self-help, it is important to shortly summarize that the house actually represents a unique product that takes around 24 hours to build as the architect can always count on the help of the homeowner and the other inhabitants of the Yard Object Group. Family participates in all of the phases of the construction of temporary houses and annexes and that the most frequent element to be annexed is a room. In other, more complex procedures, the community is also involved.

### 3.2. Permanent house

**Main characteristics.** The permanent house represents an entity which is built using standard construction materials and the usual techniques. It can be ground floor only, or have an additional floor. It represents the residential index of many a Romani settlement and offers relatively acceptable life conditions. The main characteristics of permanent houses are durable construction materials and load-bearing-walls construction type, with reinforced concrete. The

load-bearing walls are usually made out of brick, clay blocks or concrete blocks. The façade materialization is often incomplete, without thermic insulation and additional outer cladding; there are also cases where color is simply applied directly to the primary construction. If the family is wealthy, the façade is thermally insulated, with an outer cladding. Roofs are gable or shed, depending on the position of the structure on the parcel and are covered in tiles.



**Fig. 4** Permanent house

**The house-builder and building a permanent house.** The builders of permanent houses are craftsmen who are helped by the members of the family to inhabit the house and other inhabitants of the settlement. The work is complex in the beginning, before the majority of the house is constructed, but it is simpler further on, when new rooms are annexed. Zlata Vuksanović-Macura and Vladimir Macura state that, in the procedure itself, the construction of a modest house is equal in the way of building to the usual process of a classic construction. For more complex work, primarily regarding the installations in the house, an electrician is usually called (Vuksanović-Macura & Macura, 2007: 53). Annexes and adaptations of an existing permanent house, according to the experience of field research, show that an expansion of a permanent house, which includes adding living and sanitary spaces, is mostly done in the same way as its construction – through cooperation between a craftsman and the members of the family. However, annexing a small living space, such as a room, can be done by family itself and the inhabitants of the Yard Object Group. With annexing a sanitary space, the family might help the craftsman with digging and walling a cesspit. The family participates in building other annexes along with the craftsman and the involvement of friends and relatives, to whom the help will later be returned, is also possible. When it comes to the remediation of a permanent house, the improvements of living conditions in permanent houses which are conducted by many Roma families include relatively small works, such as gutter and roof repair, setting thermal and hydro insulation which are done by craftsmen with the help of family members.

**Table 2** Different forms of permanent house construction as interior community capital

Construction	Practical partaking in house construction				
	Spatial Addition (Annex)			Adaptation	Remediation
	Room	Bathroom	Floor		
Craftsman		Craftsman	Craftsman	Craftsman	Craftsman
Family	Family	Family	Family	Family	Family
Inhabitants of the Yard Object Group			Inhabitants of the Yard Object Group		
Community					

As the research has shown, a permanent house includes the participation of the family in all phases of the architectural development of the house due to the more complex process of building, but only as help to the craftsman. The elements which are usually independently annexed are, as with the temporary houses, rooms. Also as with temporary houses, besides the craftsman and the family, the members of the Yard Object Group community participate in more complicated proceedings.

#### 4. CONCLUSION

Bringing attention to very concrete resources of the Roma community has opened perspectives towards the fact that the Roma microenvironment is not only a signifier of restrictions and segregation, but living within a Roma settlement community represents an exceptional resource for exploring information which might help profile conclusions into a desirable model of solving the question of housing for the socially vulnerable Romas. Emphasizing the fact that the Roma micro environment already deep in its cultural context offers its own chance to take part in the creation of the future contemporary city from all aspects of sustainable housing is important for several reasons, and primarily because it induces the creation of equal chances in the social cohesion of the contemporary, sustainable city. Connecting an adequate physical space with the adequate cultural space and using the resources of the community in the process of planning and realization have lightened a new dimension of intersection between the sustainable architecture with the subjective space of a specific user.

The Yard Object Group, as the settlement pattern itself represents a social and cultural housing sustainability resource of the broader concept of contemporary organization of social life. However, the further analysis of this culturally adapted environment reveals other mechanisms in the form of knowledge and skills which are necessarily embedded into the lifestyle of the community, and which create the possibilities of participating in the decision-making processes during the creation of the future sustainable neighborhoods of the future sustainable cities. The constant participation in both home constructions provided the residents of the Yard Object Group with skills and abilities needed to functionally take part in the building and expanding of their homes. Again, the knowledge is a valuable resource that holds the potential to improve the economic sustainability by reducing the cost of building through including a certain number of residents as skilled labor in the future actions regarding slum upgrading, redevelopment or redesign. Their skills are valuable for two aspects. Firstly, the indigenous knowledge and techniques may be invaluable for improved adaptive capacity of houses, as they are skilled in using and reinterpreting secondary resources in non-standard ways through putting together certain parts into the entirety of a home. The experiences of UN Habitat in the aspect of environmentally sustainable housing highlights the importance of culturally-aware approaches to low-cost sustainable homes by using reclaimed and recycled materials including reinforced tire foundations, straw-bale walls, and recycled pallet wood, which should be further combined with modern methods to deliver affordable and resilient homes (Golubchikov & Badyina: 2012: 27). In that sense, the acquired skills of Roma residents regarding the use and re-use of wood are also very welcome as it is fact that wood is a well-known affordable material with low embodied energy that is often the top choice for the construction of sustainable low-cost houses from the aspect of environmental sustainability of housing (UN-Habitat, 2011: 22). Also, the skills for re-using the secondary raw materials might significantly influence the creation of a



concept of a successive building in which the Romani could be given a pre-constructed primary house, but could also later on perform and materialize the annexed parts upon a predetermined matrix themselves as a response to the requirements of dynamic changes within the family. Also, by further training of skillful craftsmen of the settlement with professional demonstrations and supervision of specific acts of construction, a training of a functional group within the community would be accomplished which at the same time includes the strengthening of its professional capacities in the processes of construction, repair or expansion of the houses. The uplift of the construction working capacity of the residents of the housing units also lifts the working capacities for further maintenance of the improved housing. The procedure which strengthens and then utilizes the internal resources in form of activating Romani's own work recognizes that the residents' active participation in construction significantly lowers the costs of both the construction and subsequent expansion and maintenance of the improved housing. The participatory design and the implementation of local user knowledge are certainly an important principle to be included into any future strategy. In a wider sense, it means that lowering the costs of Romani housing potentially creates a chance of lowering the distance towards the Romani, especially in the region of the Western Balkans where a significant part of the majority of the population suffers from similar limitations in terms of a complex improvement of housing.

Acknowledging the character of the physical structure of a culturally adjusted environment with integrated sustainability principles has a dual effect: it pushes architecture towards a smarter, more sustainable future; and, it achieves the fulfillment of certain spatial needs which enable the development of a cultural identity, meaning the enabling of adequate conditions for a lifestyle acceptable to the Roma population. It is known that, in terms of social upgrade, the ability of affirming the attributes of cultural identity and the appreciation of differences represent an inevitable condition for interculturalization which ought to be included into the architectural practice to successfully accomplish the social cohesion of the Roma people.

Other than that, the usage of hereby established methodology that follows the contemporary multi-disciplinary approach to studying the complex forms of housing shows that the exploration of everyday life process has a significant research output and can be used as an approach to resolving housing issues of other Roma communities all over the Europe. Everyday life process is important, because, the multiple impacts of various orders (economic, political, ideological, etc.) on the part of the macro-society, in which Romani live, as Marushiakova and Popov writes, have left their significant imprint on their overall development as community and the common structure of their identities (Marushiakova & Popov, 2013: 43). It means that each Roma group is unique and its particularities should be treated carefully.

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**Fig. 1, 2, 3, 4:** All schemes and photography were made by Author as an inscription during the on-site research.

## PREFERENCE I PRINCIPI ODRŽIVOSTI U NEFORMALNIM ROMSKIM NASELJIMA

*Namera rada je da osvetli činjenicu da romski mikrookruženje u svom kontekstu poseduje društvene i kulturne premise, materijalizovane u prostornim formama i načinu građenja neformalnih naselja, koji se podudaraju sa određenim principima održive arhitekture.*

*Metodološki, rad polazi od stava da su fizički obrasci prostora neformalnih romskih naselja, nastali bez uticaja struke i predstavljaju kvalitet koji je nastao iz potreba funkcionalne organizacije zajednice i odvijanja aktivnosti svakodnevnog života. U tom smislu, karakteristike prostornih organizacija i načina gradnje romskih naselja nastalih u procesu neplanskog formiranja su upravo objekat izražavanja znanja i veština zajednice u kojoj su individue povezane horizontalno i hijerarhijski te ostvaruju pozitivne odnose ultimativne za takvu realizaciju. Dalji razvoj rada odnosi se na uporednu analizu rezultata istraživanja – u formi utvrđenih i sistematizovanih karaktera fizičke strukture i načina gradnje – sa principima održive arhitekture. U tom ključu, u okviru naselja, moguće je sistematizovati bazu karaktera fizičke strukture kao realizovanih individualnih i grupnih znanja i potencijala za dalja, prihvatljiva, unapređenja u tom domenu gradnje.*

*Doprinos rada ogleda se i u usmeravanju pažnje na vrlo konkretne resurse romske zajednice koje, uz postepeno podizanje kapaciteta, treba uvažiti u procesima same realizacije u vidu organizovane samogradnje i samopomoći u procesu unapređivanja uslova stanovanja u naseljima. U širem smislu, smanjenje troškova za Romsko stanovanje ima potencijal da smanji distancu prema Romima, naročito u regiji zapadnog Balkana, gde značajan deo većinskog stanovništva trpi finansijski slična ograničenja po pitanju složenog unapređenja stanovanja.*

**Ključne reči:** *Romi, neformalna romska naselja, kulturno prilagođena sredina, izvori održive arhitekture, znanja i veštine, karakteri fizičke strukture, samogradnja*