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Climatic Adaptation of Multi-Residential Buildings in Mostar in the Second Half of the 20th Century / Klimatska prilagodba višestambenih zgrada u Mostaru u drugoj polovici 20. stoljeća

Introduction / Uvod

The subject of this research is the presence of climatic performance in examples of multi-residential buildings in Mostar. It is derived from broader research on the architectural and urban features of collective housing buildings in Mostar from 1947 to 1989. Despite the valuable architectural and urban heritage from the period of socialist Yugoslavia, previous scientific studies have insufficiently addressed this topic, resulting in a lack of architectural valorization and the continuous degradation of the housing stock from that period. Climatically, Mostar is a city on specific location, at the junction of continental and Mediterranean climates, where both summer and winter temperatures reach extreme values. /

Tema istraživanja je klimatska performabilnost na primjerima višestambenih zgrada u Mostaru proizašla iz šireg istraživanja arhitektonskih i urbanističkih obilježja zgrada kolektivnog stanovanja Mostara u periodu od 1947. do 1989. godine. Unatoč vrlo vrijednoj i značajnoj arhitektonskoj i urbanističkoj baštini iz perioda bivše Jugoslavije, dosadašnja znanstvena istraživanja nedovoljno ili gotovo nikako ne obrađuju ovu temu, što je rezultiralo nedostatkom arhitektonske valorizacije te konstantnom degradacijom stambenog fonda u navedenom periodu. Mostar je klimatski vrlo specifičan grad jer se nalazi na spoju kontinentalne i mediteranske klime gdje su zime vrlo hladne a ljeta vrlo topla.

RESEARCH PROBLEM / ISTRAŽIVAČKI PROBLEM

The lack of systematic architectural research on the housing stock of Mostar in the period from 1947 to 1989. / Nedostatak sustavnih arhitektonskih istraživanja stambenog fonda Mostara u periodu od 1947. do 1989. godine.

The way in which climatic conditions shaped the architectural features of multi-residential buildings in Mostar during the period from 1947 to 1989 has been insufficiently researched. / Nedovoljno je istražen način na koji su klimatski uvjeti oblikovali arhitektonska obilježja višestambenih zgrada u Mostaru u periodu od 1947. do 1989. godine.

RESEARCH QUESTIONS / ISTRAŽIVAČKA PITANJA

How did architects adapt modernist housing principles to Mostar's dual climate? / Kako su arhitekti prilagodili modernistička načela stanovanja dvojnoj klimi Mostara?

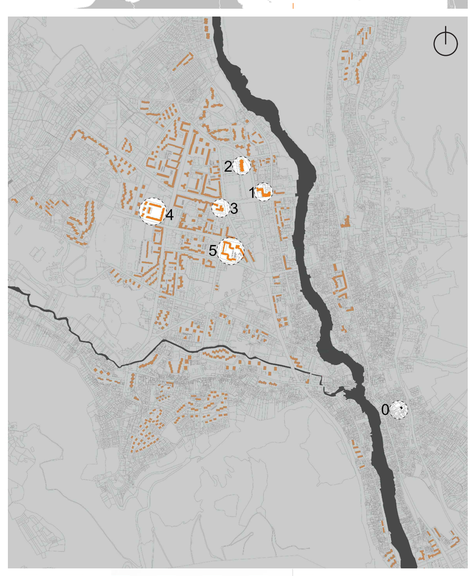
To what extent did climatic adaptation incorporate elements of traditional architecture? / U kojoj mjeri je klimatska prilagodba imala elemente tradicijske arhitekture?

AIMS / CILJEVI

To analyse how modernist housing principles were adapted to Mostar's dual climate. / Analizirati prilagodbu modernističkih načela stanovanja specifičnoj dvojnoj klimi Mostara.

To explore the integration of traditional architectural principles in climate-responsive multi-residential buildings. / Istražiti integraciju principa tradicijske arhitekture u klimatski prilagođenim zgradama kolektivnog stanovanja.







0. Kajtazova kuća, Mostar 1520.

Traditional house / Tradicijska kuća

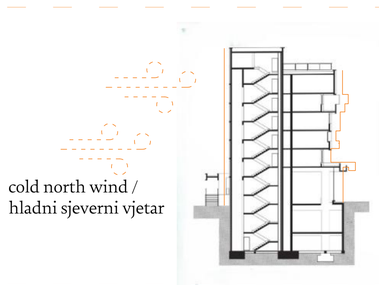
Old Herzegovian balcony residential house adapts to the climate of the city, but retains its spatial and architectural characteristics./

Stara Hercegovačka doksatna stambena kuća prilagođava se klimi grada, ali zadržava svoje prostorne i oblikovne osobnosti.

1. Stambena zgrada "Ledara", Hasan Ćemalović, 1989.

"Ledara" with its contemporary design, details, play of volumes, and various shading elements, brise-soleils and balconies, it creates an endless interplay of light and shadow characteristic of the Mediterranean. /

"Ledara" svojim suvremenim oblikovanjem, detaljima, igrom volumena i raznih sjenila, brisoleja, i balkona tvori jednu nezasitnu igru svjetla i sjene svojstvenu mediteranu.





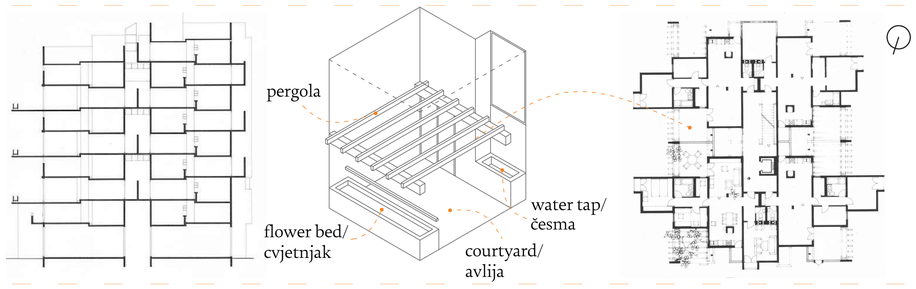




2. Stambena zgrada u naselju Centar II, Hido Hasanbegović, 1981.

Climatic performability is expressed through a two-level loggia featuring a fountain, a trough, a flowerbed, and a pergola that supports the growth of vines. During the summer months, daily life takes place in the loggia. /

Klimatska performabilnost je izražena u dvoetažnoj lođi s česmom, koritom, cvjetnjakom te pergolom koja pomaže rast loze. Život u ljetnim mjesecima se odvija u lođi.



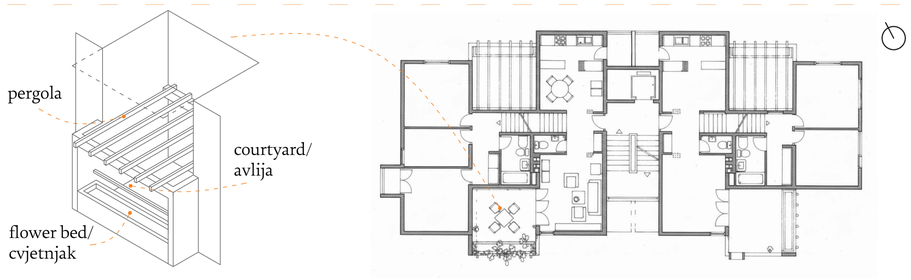




3. Stambena zgrada u Splitskoj ulici, Hido Hasanbegović, 1979.

The apartments are duplex, with the public part oriented toward a loggia that serves as an interpretation of the traditional courtyard, while the private areas feature separate doksats. /

Stanovi su dvoetažni te se javni dio stana orijentira na lođu koja je interpretacija tradicionalne avlije, dok privatni dijelovi imaju zasebne doksate.



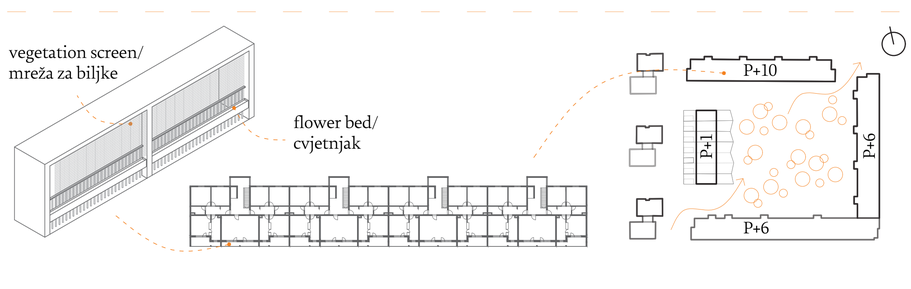


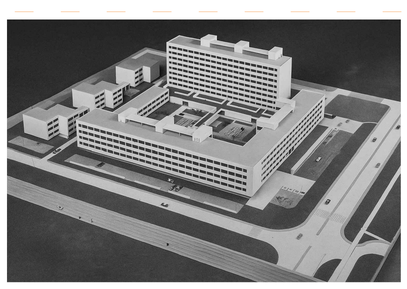


4. Stambeni blok "Eksperiment", Dušan Miljak, 1974.

The block is protected from the cold northern wind by the orientation of its tallest slab towards the north. The loggias on the southern side are shielded by a mesh with climbing plants. /

Blok je orijentacijom najviše lamele na sjever zaštićen od hladnog sjevernog vjetra. Lođe na južnoj strani zaštićene su mrežom s penjačicama.



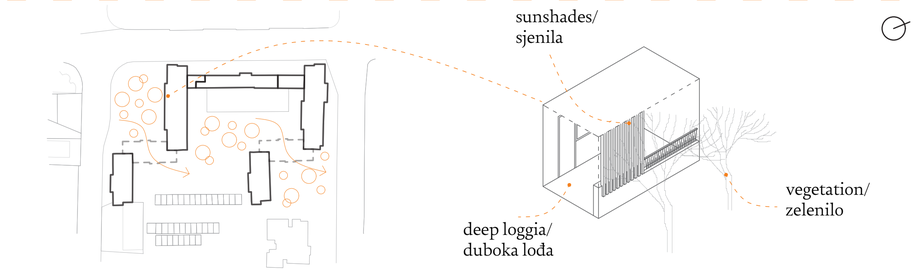




5. Stambeni blok "Zgrade na stupovima" , Romeo Tiberio, 1960.

The block is urbanistically and architecturally adapted to the climate of Mostar. Greenery and deep loggias, partially shaded by fixed brise-soleils, provide excellent protection from the southern sun./

Blok je urbanistički i oblikovno prilagođen klimi Mostara. Zelenilo, duboke lođe, koje su djelomično zasjenjene fiksnim brisolejima čine odličnu zaštitu od južnog sunca.







Conclusion / Zaključak

The architects adapted to the specific climate of Mostar by using various design elements and the urban layout of the residential buildings. From an urban planning perspective, the blocks are sheltered from the cold winter wind. The architects employed elements such as pergolas, shading devices, deep loggias, and flowerbeds to provide protection from the southern sun. Some of these elements were derived from traditional architecture./
Arhitekti su se prilagođavali specifičnoj klimi Mostara koristeći razne oblikovne elemente te urbanističku postavku stambenih zgrada. S urbanističkog aspekta blokovi su zaklonjeni od hladnog zimskog vjetra. Arhitekti koriste elemente poput pergola, sjenila ,dubokih lođa i cvjetnjaka kako bi se zaštitili od južnog sunca. Neke od elemenata preuzeli su iz tradicijske arhitekture.

HYPOTHESES / HIPOTEZE

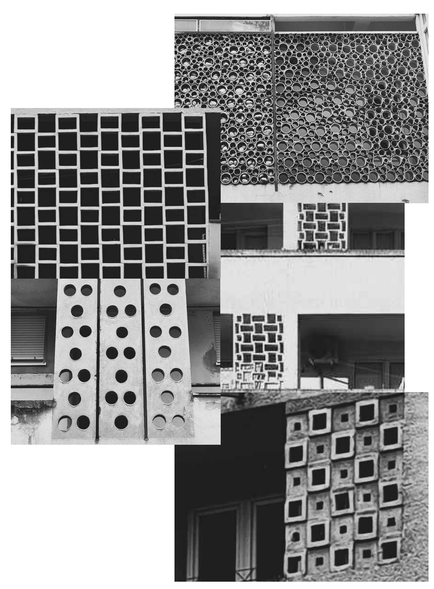
Architects adapt to Mostar's dual climate through the design and orientation of collective housing buildings. / Arhitekti se oblikovanjem i orijentacijom zgrada kolektivnog stanovanja prilagođavaju dvojnoj klimi Mostara.

The multi-residential buildings of Mostar from 1947 to 1989 adapt to the conditions of the local climate and reinterpret the elements of the traditional house./ Višestambene zgrade Mostara od 1947. do 1989.g. prilagođavaju se uvjetima lokalne klime i interpretiraju elemente tradicijske kuće

CONTRIBUTIONS / OČEKIVANI DOPRINOSI

Development of guidelines for the design of contemporary multi-residential architecture adapted to climatic conditions similar to those in Mostar. / Razvoj smjernica za projektiranje suvremene višestambene arhitekture prilagođene klimatskim uvjetima sličnim onima u Mostaru.

Archiving and digitalization aimed at preserving Mostar's identity through the architectural heritage of the 20th century. / Arhiviranje i digitalizacija te očuvanju identiteta Mostara kroz arhitektonsko naslijeđe dvadesetog stoljeća.



Sunshades / Sjenila

Shading devices are one of the elements that architects have used for sun protection. Some of them are decorative, while others such as the traditional "musharabiyah" serve to ensure privacy. The primary function of shading devices is to partially block or filter sunlight. /

Sjenila su jedan od elemenata koje su arhitekti koristili za zaštitu od sunca. Neki od njih su dekorativni, neki kao tradicionalni "mušebek" služe za postizanje privatnosti. Primarna namjena sjenila je djelomično zaklanjanje odnosno propuštanje sunčevih zraka.