



MILD HOME
project and
opportunities
for living in
nearly zero
energy house

European labor
Institute

MILD HOME project within SEE program

Main goal: to promote intelligent urban planning focusing on energy efficiency and eco behavior

My modular



Intelligent

**LOW
COST**



DiY



MILD HOMES for our EGV

- Innovative aspect: combination of the characteristics of a nearly zero energy house with low costs, used materials : with good energy saving performance, natural, local, not expensive, modularity, standardization, building automation, RES, Do it Yourself approach.
- The project aims at defining, designing and boosting the building of MILD HOMES conceived to be located in an Eco Green Village (energetically self sustainable, zero emission, with eco waste management and low water footprint) for the SEE area.



Who are the partners?

Lead partner - UCV - Regional Union of Veneto's chambers of commerce, Italy

CARA - Municipality of Castelnuovo Rangone, Italy

ENERO - Centre for Promotion of Clean and Efficient Energy in Romania

CJCS - Caras-Severin County Council, Romania

BCCI - Bulgarian Chamber of Commerce and Industry, Bulgaria

ELI - European Labour Institute, Bulgaria

SOF - Municipality of Sofia, Bulgaria

EEE – European Centre for Renewable Energy, Austria;

SZE - Szechenyi Istvan University, Hungary

BBI - Building Biology Institute Austria;

MSV - THE CITY MUNICIPALITY OF SAVSKI VENAC, Serbia;

RER - Emilia-Romagna Region, Italy.

What are the main activities?

Partners create solutions for common approaches and standards for MILD HOMEs taking into account the specific geographical areas.

A large, light green arrow pointing to the right, containing three rounded rectangular boxes. The first box contains the text "Common approaches and characteristics", the second box contains "Region based specifications", and the third box contains "Architectural models and concrete actions".

Common
approaches and
characteristics

Region based
specifications

Architectural
models and
concrete actions

MARKET ANALYSIS - SUMMARY OF SUPPLY AND DEMAND ISSUES IN SOFIA

- **Questionnaires:** 192: 92 - by construction professionals and 100 - by non-professionals.
- **Age of the respondents [years]:** 18 – 68.
- **The majority considers necessary:** 3 types of MILD HOMES (primary: 50-100 m², secondary: 150 – 250 m², tertiary: 200-400 m²); Secondary or tertiary – as single-family houses or houses with 2-4 living units and yard; Habitants – families, all generations;
- **Target group of primary MILD HOME:** students, young couples, young families.

RESULTS:

- **Used materials and structures: natural** materials incl. recycled or reused materials; locally manufactured, possibility of “do it yourself”; natural origin; having certifications according to standards; with high built-in energy levels; without toxic impact.
- **Environmental protection:** reduction of CO₂ ; vegetation around the buildings and use of green structures, use of sparing water management systems; noise protection (outside and inside); reduction of the electromagnetic pollution; fire prevention.
- **Energy performance**
 1. Passive strategies – reduction of the thermal bridges, optimizing the use of the solar radiation (heating, cooling, natural light), shading systems, ventilated building envelope elements;
 2. Active strategies - efficient building engineering systems, including RES
- **Energy resources - the most available in BG:** Solar energy (harvesting electricity and heat); Hydro power; Biomass; Bio fuel; Geothermal

EGV:

- **Communal spaces of adjusted homes:** multifunctional; sport; child care; laundry; garden; bicycle storage;
- **Services - in the EGVillage:** post office; bank; hairdresser; tailor; laundry; small retail units (food, drinks); shoe-fashion-book shop; nursery; health centre + pharmacy; sports areas; swimming pool; playground; restaurant;
- **Service systems - installed for a group of MILD HOMES increasing the energy and cost efficiency:** power plant for electricity; primary power plant for producing heat; equipment's for water purification and water softening; rainwater collection network; wastewater treatment equipment; waste treatment equipment;
- Financial return period of a MILD HOME: up to 10 years –primary homes; 15 -20 – secondary and tertiary;
- The preferred transport is public and by cars (till the town) and “green” one – in the EGV.

Analysis show a positive attitude towards EGV under the condition MILD HOMES in it to be financially accessible, energy efficient and comfortable; People are ready to buy and live in MILD HOMES/EGV in case they are financially affordable, comfortable, eco and energy efficient.

EXPECTATIONS:

Projects should be more visible for the citizens and construction professionals, as well the topics of EE and RES, and ECO among the BG people;

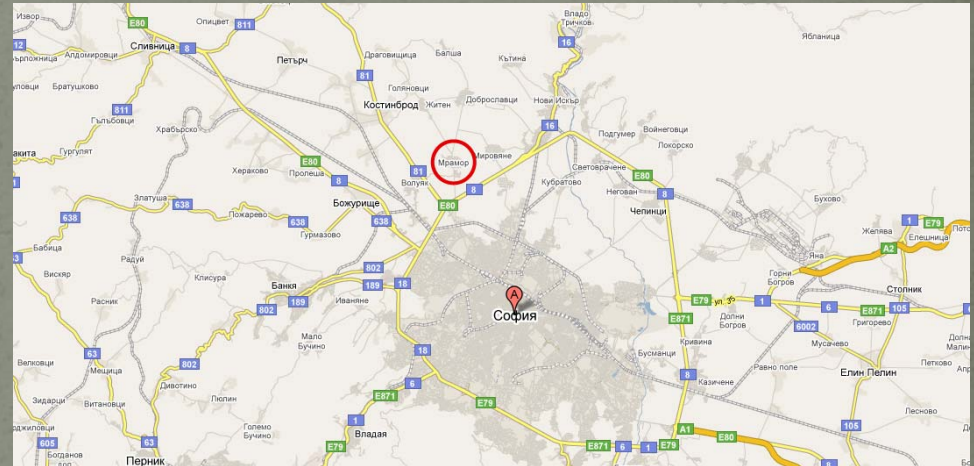
- In a MILD HOME: own property for lifelong stay, with flexibility; rental via public-private partnership.
- Lifespan of a MILD HOME: 50-100 years;
- Financial return period of a MILD HOME: up to 10 years –primary homes; 15 -20 – secondary and tertiary;
- Financial structure for MILD HOME: the target group buys the dwelling with savings or with bank loans;
- The preferred transport is public and by cars (till the town) and “green” one – in the EGV.

Analysis show a positive attitude towards EGV under the condition MILD HOMES in it to be financially accessible, energy efficient and comfortable; People are ready to buy and live in MILD HOMES/EGV in case they are financially affordable, comfortable, eco and energy efficient.

The focus is on eco - characteristics and energy efficient solution.

Chose territory

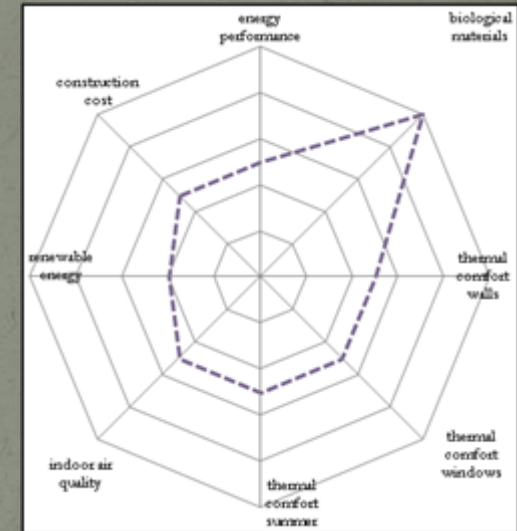
The territory – Mramor village
-12 km distance from Sofia city center;
-area- around 93 000 sq. m



Competition of ideas

Procedures:

- Technical assignment development
- Software instrument;
- Public tender;
- Jury - choice;
- Participants – 8 architectural teams;
- Afterwards activities – training and Round table discussions regarding resources of financing.



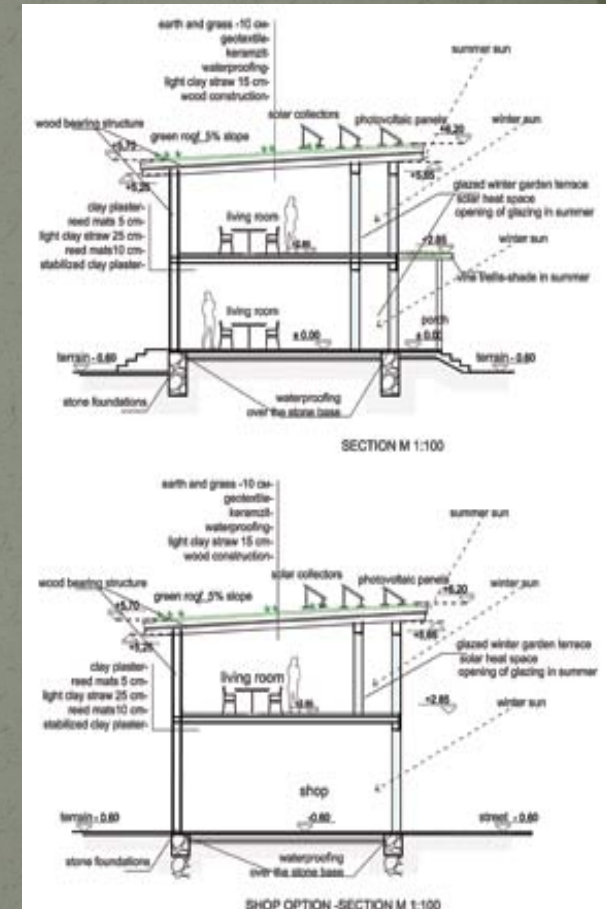
First place: MILD HOMES and EGV

- ✓ building integrated RES ;
- ✓ compact architectural shape of the buildings
- ✓ the energy performance of the buildings is **class A**;
- ✓ suitable eco-materials – wood, straw, clay, linen wadding;
- ✓ wooden shading system



Third place

- ✓ Interpretation of the traditional Bulgarian Residential buildings from the Revival period;
- ✓ Pergolas and terraces- architectural elements suitable for the specific climate conditions;
- ✓ The “earth technology” guarantees annually constant temperature and humidity.



Next steps

- EGV model for SEE developed- ready for multiplication
- Looking for financial sources and business models for its realization, most appropriate – public-private partnership.

Thank you for your attention

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