

LYUKÓVÖLGY SUSTAINABILITY PROPOSAL PACKAGE

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This document contains medium- and long-term intervention ideas, priorities, and sample projects that support the sustainable transition of Lyukóvölgy, with the aim of reducing energy poverty, housing vulnerability and environmental fragility, and building on the active participation of local actors (local government and relevant departments – social, urban management, public transport, architecture; Maltese Charity Service and community centre; local resident groups).

I. PRIORITY AREAS AND PILOT PROJECT DIRECTIONS

1. ROOF INSULATION AND RENOVATION PROGRAM

- With local contractors, material support, and coordination by Malta.
- On a participatory basis, according to selection criteria proposed by Social Lab:
 - building structure (tiles, corrugated iron, sheet metal, etc.),
 - selection of households in the pilot area based on location (streamside, hillside, hilltop),
 - participation based on need and willingness to cooperate (need criteria: number of children, number of dependent elderly people).
- Supported elements: roofing material, beams, glass wool insulation, waterproofing layer, eaves.

2. USE OF LOCAL GOVERNMENT FIRE RESIDUES¹

- Establishment of a regular distribution system with an application system.
- Actors: local government + Maltese Charity Service with logistical support.
- Priority areas: storm damage and other environmental disasters - this requires a baseline survey of the streets/street sections most exposed to environmental disasters (e.g., flash floods, windstorms).
- Recommended raw materials: broken bricks, wood, thermal insulation boards, cement residues.

¹ Related good practices in the appendix at the end of the document

3. SECURITY OF ENERGY ACCESS

- Replacement of informal connections:
 - Standardized, cost-effective connection options with the involvement of public utility providers.
 - Pre-financed "small package" (card meter, standard wiring).
- Public education: energy security, fire prevention.

4. REOPENING OF PUBLIC WELLS ²

- Background: the water network is theoretically in place, but most of the public wells are closed or unusable + this commitment was already included in the Miskolc 2021-2027 Anti-Segregation Action Plan
- For wells that are already closed, based on a joint decision (local government, MÁLTA, community group), select the three most important, most centrally located closed public wells + excavate them + assess their technical condition.
- Scheduled reopening (based on a priority list drawn up considering the needs assessment and the possible framework determined by the public service provider):
 - first round: longer dead-end streets, hilltop sections where there is no mains water.
 - Second round: community hubs (near playgrounds, community centres, bus stops).

5. DEVELOPMENT OF WATER DRAINAGE INFRASTRUCTURE

- Current status:
 - Built 2 years ago in some places, but not maintained,
 - frequent blockages due to weeds, sediment, and trash,
 - residents clean it periodically, which causes water to back up into the cleaned sections.
 - this commitment was already included in the Miskolc 2021-2027 Anti-Segregation Action Plan
- Intervention: regular ditch cleaning + planting/creating water-retaining vegetation in areas at high risk of flash flooding:
 - cross ditches on hillsides,
 - protective vegetation strips to slow down water,
 - creation of pools along streams (as water collectors, transformed into green community spaces).

² Related background document on the infrastructure and public water supply in Lyukóvölgy in the appendix at the end of the document.

6. INSTALLATION OF HOUSE NUMBER AND STREET NAME SIGNS

- Objective: improved accessibility of public services (garbage collection, ambulances, utilities).
- Implementation:
 - property identification survey,
 - volunteer street coordinators to assist with registration,
 - street signs + easy-to-install, weather-resistant house number signs.

7. ELIMINATION OF ILLEGAL WASTE DUMPING

- Locations: areas between the main road and the stream bank where (not only) locals regularly dump waste and where illegal dumping causes the most environmental pollution and public health hazards
 - Intervention:
 - Constant monitoring of bus stop access roads and stream banks, as the main illegal waste disposal sites (cameras, community reporting system).
 - Clean-up through public works or volunteer action.
- ### 8. COMMUNITY RENEWABLE ENERGY + ENERGY-EFFICIENT HOME PROGRAM

- Goal: energy independence, real and effective cost reduction.
- Energy efficiency retrofits (window replacement, replacement of refrigerators/washing machines with energy-efficient models).

9. COMPETENCE DEVELOPMENT FOR RESIDENTS

- Topics:
 - energy awareness, safe home maintenance,
 - drainage cleaning, waste management,
 - material procurement options (demolished, recycled).
- Forms:
 - resident community meetings at the Maltese community centre,
 - field demonstrations (e.g., around the jointly reopened public well).

10. COMMUNITY DECISION-MAKING ON THE EUKI PILOT PROJECT FRAMEWORK

- Community participation:
 - The Social Lab group will decide which of the above proposals will be included in the EUKI pilot project framework for the following year, and with the involvement of the Maltese and local authorities, we will approve the use of the budget for the given pilot project.

II. AREA PRIORITIES (BASED ON BACKGROUND MAPS AND INFRASTRUCTURE)

1. Lower stream section:

- Urgent:
 - prevention of leaks (creation of catchment basins),
 - removal of waste dumps (washing into the stream bed),
 - regular, mechanical maintenance of drainage ditches.

2. Upper, hillside streets:

- Problem:
 - muddy, deeply rutted dirt roads,
 - runoff water, erosion, impassable terrain.
- Solution:
 - transverse drainage ditches,
 - barrier vegetation strips and water catchments,
 - priority given to creating a transport zone that remains accessible even after rain.

3. Main street and side connections:

- Task:
 - Installation of street name signs and house number signs,
 - Widening of connections, increasing visibility,
 - Designation of collection points: e.g., mobile waste collection site, information column.

III. PARTICIPANTS AND THEIR TASKS

- Local government: coordination of firewood, public well network, public space maintenance.
- Maltese Charity Service: facilitation, household support programs, education.
- Electricity provider: creation of regular connections, monitoring.
- Waste disposal company: collection even in small streets, elimination of illegal dumps.
- Public space maintenance: pruning, drainage, road stabilization.
- Owners (including non-residents): responsibility for maintaining the condition of the property.
- Residents: reporting, voluntary maintenance, participation.
- Social lab group: decision-making body.

COMMITMENTS MADE IN THE MISKOLC MUNICIPALITY'S 2021-2027 DEVELOPMENT STRATEGY,

MONITORING AND JOINT REVIEW –

Improving the housing conditions and circumstances of those living in the Lyukóvölgy segregated area:

One of the objectives of the EUKI project may be to monitor the allocation of the following budget to Lyukóvölgy to ensure that this amount of development funds has actually been spent so far and will be spent on Lyukóvölgy by 2027, as well as jointly reviewing the current Anti-Segregation Plan with the local government and the Maltese, incorporating and prioritizing environmental justice, green transition, and energy security considerations, also based on the above sustainability proposal package.

Improving living conditions – the first two are relevant and important to us:

- Installation of public wells
- Improvement of public lighting
- Improvement of the camera system
- Elimination of illegal waste

The planned financial framework of the Anti-Segregation Plan 2021-2027 for Lyukóvölgy:

650 million forints (from social urban rehabilitation funds/ESF)

From these planned resources:

- State subsidy
- European Union subsidies
- Institution maintenance own
- budget
- Municipal resources

Objectives

1. Operation of complex social inclusion programs and development of family communities
2. School integration, reducing dropout rates.
3. Improving health
4. Creating opportunities for people with multiple disadvantages in the field of employment

Transfer houses:

- Construction of approximately 30 semi-detached houses of varying comfort levels, linked to settlement-type social work.
- Sociological survey: families, houses in the segregated area, assessment of ownership conditions, designation of target area, moving into social housing in an integrated area

Reducing school dropout rates

- Finding new ways of communication between parents and schools, with the involvement of civil organizations and experts.

Health awareness programs.

- Wider dissemination of preventive information.
- Implementation of health guard, screening, and prevention programs
- Drug prevention
- Programs promoting responsible animal husbandry.

Promoting employment:

- Pact office relocation campaigns,
- Competence assessments, mentoring services
- Establishment and operation of a work trial centre, encouragement of social enterprise creation
- Development of labour market competencies

IV. NEXT STEPS

1. Detailed consultation (at the next community social lab, with the involvement of the local government)

- a. Community validation of the list of regional priorities
- b. Selection of pilot project(s) with the social lab group
- c. Joint review of the relevant parts of the current Anti-Segregation Plan for Lyukóvölgy

2. Implementation of the pilot project (2025–26)

3. Impact monitoring and extension to new zones

APPENDICES

1. Good examples of ideas for urban community firewood for those in need

2. Infrastructure provision - Lyukóvölgy

3. Situation based on field experience and urban strategic documents – Lyukóvölgy

1. GOOD EXAMPLES FOR URBAN COMMUNITIES IN NEED

Examples / case studies

1. [The Green Project](#) (New Orleans, USA)

- The Green Project is a non-profit organization that collects building materials (e.g., wood, doors, windows, bricks, bathroom fixtures) from donations, demolitions, and renovations.
- The materials are refurbished (if necessary) and then sold, used for community projects, or made available to those in need.
- This not only reduces waste, but also minimizes building material costs and builds community awareness.

Lesson learned: if a municipality becomes a partner and provides building materials from demolitions, then operating a "material bank"/reuse center may be feasible.

2. [Urban Ore](#) (Berkeley, California)

- Urban Ore is a salvage yard (a collection and distribution center for used/recycled materials).
- People can bring in demolished and dismantled materials (roof tiles, wood, fittings, doors, windows, etc.), which are sorted, repaired, and resold/passed on.
- The municipality can cooperate with it (e.g., material donations, tax and transport discounts) so that the materials do not end up in a landfill.

Lesson learned: a well-organized "material exchange/salvage/reuse yard" model can also be adapted to a municipal context – and can also include households in need with discounted access.

3. [The Super Circular Estate](#) (Kerkrade, Netherlands)

- This is a social housing project where materials from the demolition of an old apartment building are collected ("circular demolition") and four trial properties are rebuilt using recycled and recyclable techniques.
- Residents and former residents can also be involved in the design and operation ("co-design, monitoring").
- The aim of the project is not only to recycle materials, but also to ensure social and community participation.

Lesson learned: demonstration "pilot homes" can serve as a good model – local authorities can create "pilot streets for reconstruction" where they distribute materials and monitor the results.

4. [Waste Not, Want Not](#) case studies (USA, various projects)

- Waste Not, Want Not: Case Studies of Building Material Reuse presents several projects where building materials were recovered, recycled, and reused.
- The case studies often highlight challenges: for example, many materials are undocumented, damaged, transportation logistics are costly, and sorting for "recycling" is demanding.
- However, they also show that with conscious planning (e.g., demountable structures, preliminary demolition audits), many valuable materials can be recovered.

Lessons learned / success factors.

The above points highlight some key considerations that should be considered in a municipal firewood distribution program:

Success factor / challenge

What it means / how to deal with it

Preliminary audit / sorting

When materials are brought to the fire station, it is important to assess their condition (building material, damaged, type). An audit helps to avoid the release of materials in poor condition or hazardous materials.

Targeted dismantling

When demolishing buildings, it is worth dismantling them in such a way that the materials are damaged as little as possible – e.g., bolted connections, modules, demolition plan. (This is the deconstruction method.)

Storage, handling, renovation

The collected materials must be stored (covered warehouse, organized shelves) and often require minor repairs and cleaning to be reusable.

Distribution mechanism/ discount

Preferential access for households in need (e.g., free or discounted removal, delivery, technical support).

Governance/ regulation

Who decides who is eligible? What rules apply to safety and guarantees? How do you account for it?

Involvement of partners

Involvement of civil society organizations, social enterprises, construction companies, skilled workers → job opportunities, sustainability.

Conscious communication / education

Show residents and users why recycling is good and how the materials are used.

Small pilot project

Initially, a small-scale pilot project where results can be monitored, and lessons learned from mistakes.

Recommended approach for a domestic/local model

If we are considering distributing building materials collected by the municipality (materials from larger municipal or state renovations, as well as additional private and residential renovations) to those in need, I recommend the following steps:

1. Survey, estimation

- What types of materials are collected there (bricks, tiles, wood, windows, doors, fittings, etc.)
- What condition are they in
- How much can be expected on a continuous basis

2. Launch a pilot/test project

- Involve a few households in Lyukóvölgy based on the selection criteria of the sustainability proposal package
- Distribute material packages for renovation, e.g., roof replacement, window replacement, minor insulation elements
- Document costs, technical challenges, and user feedback

3. Development of a distribution system

- Product range, catalogue (what is available, how much, in what condition)
- Designated service day, advance registration system
- Payment/subsidy system (e.g., free or discounted based on need)
- Transport/delivery options

4. Rules, safety, warranty

- Technical certification (when not suitable)
- Safety regulations (e.g., fittings, electrical components)
- Liability issues (who is responsible for defective materials)

5. Partnerships/collaborations

- Involvement of civil society organizations and social enterprises
- Agreements with construction companies and demolition contractors (material donations, demolition support)
- Educational workshops, public workshops

6. Communication, education

- Presentations for residents, open days
- Presentation of successful renovations
- User manuals, online catalogue

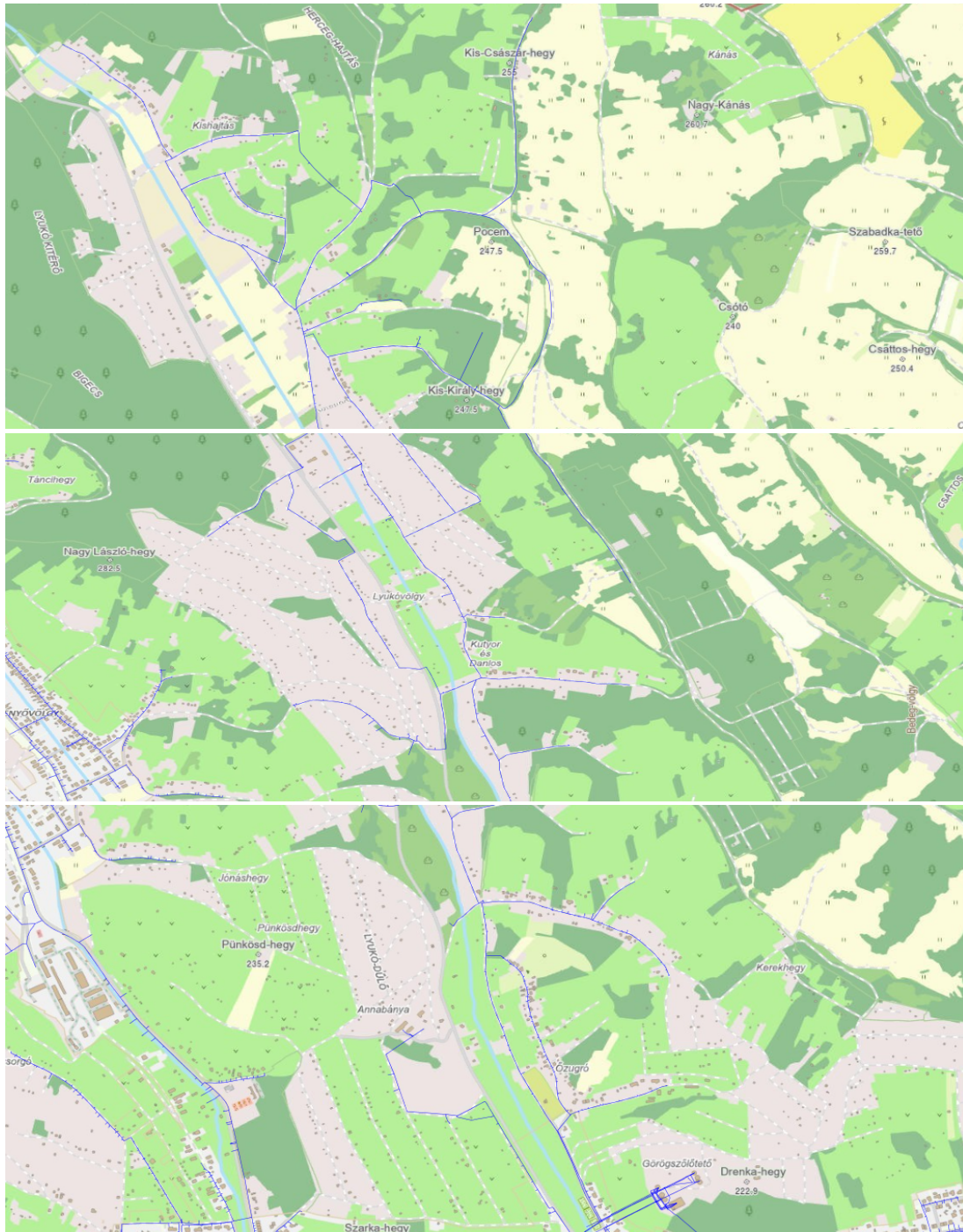
7. Scalability and long-term sustainability

- Gradual expansion based on the pilot
- Development of a maintenance model (e.g., share, cost price, subsidies)
- Monitoring, evaluation, continuous feedback

INFRASTRUCTURE PROVISION – LYUKÓVÖLGY

There is no sewerage system, and no water drainage and no water ditch built officially.

Water supply system



The image consists of three vertically stacked maps of the Lyukóvölgy (Lukovölgy) area in Hungary. The maps show the Lúgospatak river (Lugospatak) flowing through the region, with numerous tributaries and settlements. The top map shows the upper part of the valley, with settlements like Kiskőrös and Kiskőrös-dűlő. The middle map shows the central part, including Lyukóvölgy and Kiskőrös-dűlő. The bottom map shows the lower part, including Kiskőrös-dűlő and Kiskőrös. The maps are detailed, showing roads, fields, and the river network. The river is shown in blue, and the surrounding area is in light green and yellow. The settlements are marked with red dots and labeled in Hungarian. The maps are oriented with North at the top.

3. SITUATION BASED ON FIELD EXPERIENCE AND URBAN STRATEGY DOCUMENTS - LYUKÓVÖLGY

Location and historical background:

Lyukóvölgy is a suburb located on the north-western outskirts of Miskolc, in the valley of the Lyukóvölgy. It covers an area of nearly 10 km² and has a significant coal mining history: mining activity took place between 1938 and 2004, employing up to a thousand people at one time. Since the closure of the mine, part of the area has been used as a landfill site. The valley was originally developed as a holiday resort, but over the past decades it has gradually become a permanent residential area, mainly for low status, marginalized social groups.

Land structure and built-up area:

There are approximately 4,000 plots in the valley, most of which are former weekend plots. Of these, approximately 1,400 plots have some kind of structure on them – typically small wooden houses, extensions, temporary structures, or converted vacation homes. Most of the inhabited plots do not have an official address or clear ownership status, which also hinders access to public services.

Social characteristics

- Population: estimated at approximately 3,000–4,000 people, although field experience suggests that this figure may be higher.
- Extreme poverty: approximately 90% of the population lives in extreme poverty.
- Proportion of Roma population: also estimated to be around 90%.
- Proportion of residents without a registered address: approximately 50%.
- Ownership status: largely unregulated, with frequent illegal squatting.
- Children at risk:
 - 0–3 years old: 78%
 - 3–6 years old: 78%
 - School-age children: 50%
- School dropout rate: exceptionally high.
- Employment:
 - Approximately 40% of the working-age population are employed in public works, as unskilled laborers, or as undeclared casual workers.
 - 30% of households have no family member with an income.

- Transport: public transport is theoretically available, but many residents cannot afford a pass, stops are far away, roads are muddy and impassable, and are difficult to access with a stroller, on foot, or by ambulance.

Infrastructure and public utilities

- Piped water supply: 90% of the population does not have access to it. Many people carry water daily from distant public wells or springs.
- Electricity: "practically everywhere," but approximately 40% is informal and improperly installed. This leads to frequent fires and power outages.
- Gas supply: none (with rare exceptions).
- Sewage disposal: none – instead, septic tanks or home solutions are used, which can cause soil contamination.
- Road network: gravel, muddy, potholed, with forest paths in many places.
- Public wells: closed in many places, no maintenance.

Environmental risks and vulnerability

- Flash floods: houses along the Lyukó stream and in low-lying areas are often flooded during heavy rainfall.
- Drainage: the local government has built sewers in several streets, but due to lack of maintenance, they have become clogged with weeds, soil, and rubbish.
- Roof damage: during storms, tiles and slates often break, especially on houses built from waste materials or added to by the owners themselves.
- Aging trees and vegetation grow over the power lines, which often break during storms, creating life-threatening and fire-hazardous situations.
- Waste disposal: there are numerous illegal dumps, especially on the banks of streams and at exits off the main road, where non-local residents often bring their trash.

Development and strategic context

- Lyukóvölgy is not currently a priority area for urban regeneration, unlike the Tetemvár or Bábonyibérc areas, for example.
- In the 2021–2027 urban anti-segregation planning period, the complex rehabilitation of Lyukóvölgy was only included as a goal, with no concrete steps taken.
- Lyukóvölgy appears indirectly in Miskolc's comprehensive medium-term development documents (ITS, HEP, FVS), but there is a lack of concrete interventions and resource allocation.
- According to a critical assessment of the HEP, elements of public utility development and environmental justice are underrepresented, even though the local population is structurally vulnerable in terms of the environment.

Summary

Lyukóvölgy is a typical example of a segregated settlement on the urban periphery with informal housing and serious infrastructure deficiencies, where environmental, social, and public service disadvantages are intertwined. The development of the area requires complex, requires multi-level interventions, with a focus on the development of public utilities, housing security, and the reduction of environmental risks, in close cooperation with the population, civil society organizations, and public service providers.