

# **CLEANER AIR FOR MUNICIPALITIES – FEASIBLE MEASURES AND INTEGRATION OF CIVIL SOCIETY ORGANISATIONS**

**EU4Green Recovery:**

**Support the implementation of the Green Agenda for the Western Balkans**

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# 1. EXECUTIVE SUMMARY

Air pollution remains one of the most pressing environmental and public health challenges in the Western Balkans. At municipal level, emissions from domestic heating—particularly the use of solid fuels such as coal and wood in inefficient stoves and boilers—are a dominant source of particulate matter (PM2.5 and PM10) and other harmful pollutants. While national frameworks define overall policy directions, municipalities are at the frontline of implementation. Their ability to design and execute effective local measures depends not only on technical and financial capacity, but also on social acceptance, trust, and citizen engagement.

This report analyses feasible municipal-level measures to improve air quality, with a particular focus on domestic heating, and examines the role of Civil Society Organisations (CSOs) in environmental governance. Drawing on a pilot case implemented under EU4Green activities, and in line with the [Guidance for Effective Air Quality Management – Developing Local Air Quality Plans](#) developed by EU4GREEN, the report demonstrates how structured engagement between municipalities and CSOs can strengthen participation, improve communication, and increase the effectiveness and legitimacy of local air-quality interventions. In addition, the analysis of household-level measures reflects the priorities set out in the EU4GREEN [Guidance for Effective Air Quality Management – Tackling Emissions from Domestic Heating](#), highlighting the importance of coordinated local action in reducing pollution from residential sources.

Key findings show that CSOs play a crucial bridging role between authorities and citizens. They contribute to awareness-raising, capacity-building, participatory planning, and the implementation of concrete projects. However, their engagement is often ad hoc, under-institutionalised, and limited by resource constraints and unclear mandates. Strengthening cooperation frameworks, supporting peer-to-peer learning, and promoting participatory and community-led models such as energy cooperatives are essential to achieving sustainable improvements in air quality.

The presentation of an Austrian examples of energy communities and cooperatives during workshops generated significant attention. While EU4Green was able to explain how such approaches function within Austria’s established legal and regulatory framework, the pilot case did not allow for a detailed analysis of how comparable models could be integrated into the beneficiaries’ existing legal systems and energy infrastructures. Additional targeted support in this area would therefore be highly beneficial.

The report concludes with a set of practical recommendations for municipalities, CSOs, and national and international partners to enhance local-level implementation and integration, including encouraging municipalities to openly discuss challenges and learning needs in moderated peer settings, and promoting structured exchange and mutual learning among municipalities to share best practices and overcome common obstacles.

## 2. INTRODUCTION

Air pollution in the Western Balkans is a structural problem rooted in energy poverty, outdated infrastructure, and heavy reliance on solid fuels for heating. In many municipalities, especially outside capital cities, households use wood, coal, or low-quality biomass in inefficient stoves and boilers. These practices generate high levels of particulate matter, carbon monoxide, and other pollutants that have severe impacts on public health, including respiratory and cardiovascular diseases. Addressing this challenge is a core objective of the EU4Green project, implemented by the Environmental Agency Austria, which supports partner countries in aligning their environmental policies and practices with the EU acquis and EU environmental standards. Emissions from domestic heating are addressed in the EU both directly and indirectly through a range of strategies, regulations, and directives, making regulatory alignment a key pathway for improving air quality in the region.

Improving air quality is a multi-level governance challenge. While national governments set legal frameworks, standards, and energy policies, municipalities are responsible for spatial planning, building permits, local energy systems, and the design and implementation of measures targeting households and public buildings. At the same time, air quality is a “common good”: individual behaviour matters, but only coordinated, collective action can generate systemic change.

In this context, Civil Society Organisations (CSOs) have a crucial role. Under principles enshrined in instruments such as the Aarhus Convention, CSOs are recognised as key actors in ensuring access to information, public participation, and access to justice in environmental matters. In practice, CSOs in the Western Balkans engage in awareness-raising, project implementation, monitoring, advocacy, and community mobilisation. Their proximity to citizens and their flexibility make them essential partners for municipalities seeking to implement air-quality measures that are socially accepted and effective.

This report builds on a pilot case conducted within the EU4Green framework, which aimed to demonstrate how CSO engagement at municipal level can contribute to cleaner air through improved domestic heating strategies. The pilot is directly informed by the EU4Green [\*Guidance for Effective Air Quality Management – Tackling Emissions from Domestic Heating\*](#), which addresses this challenge in detail and provides practical direction for the Western Balkans context.

### 3. MUNICIPAL MEASURES FOR CLEANER AIR: FEASIBLE INTERVENTIONS

Improving air quality at the municipal level requires an integrated portfolio of technical, regulatory and social measures. In the Western Balkans, emissions from domestic heating remain a dominant source of particulate matter and other pollutants. Municipal authorities are therefore uniquely positioned to influence both the physical infrastructure of heating systems and the behavioural choices of households. However, their effectiveness depends on combining energy efficiency, cleaner technologies, renewable energy, and sustained public engagement into a coherent local strategy.

#### **Energy Efficiency in Buildings**

Energy efficiency is the most cost-effective and immediately impactful means of reducing emissions from heating. Poorly insulated buildings require more fuel to maintain adequate indoor temperatures, which in turn increases pollution. Municipalities can significantly lower demand by supporting thermal insulation of walls and roofs, replacing inefficient windows and doors, and upgrading building envelopes in both public and private structures. In many municipalities, subsidy schemes have been introduced to encourage households to invest in such measures. These schemes often cover a portion of the cost and are designed to address energy poverty while reducing emissions.

Nevertheless, experience shows that financial incentives alone are insufficient. Uptake is frequently slow in the early stages due to limited awareness, administrative complexity and low trust in new programmes. Effective energy efficiency policies therefore require not only funding, but also targeted communication, technical assistance and partnerships with local actors who can explain the benefits in practical, accessible terms.

#### **Reducing Energy Demand through Building Retrofit and Modern Technologies**

Reducing energy demand is an effective municipal measure for improving air quality, particularly in regions where domestic heating relies heavily on solid fuels. Many buildings in the Western Balkans were constructed before modern energy standards and therefore lose large amounts of heat through poorly insulated walls, roofs and windows. This leads to excessive fuel use and high emissions of particulate matter. Systematic retrofitting of buildings is therefore a core element of any local clean-air strategy.

Municipalities can begin with their own building stock, such as schools, kindergartens and administrative facilities. By improving insulation, replacing windows and installing efficient heating controls, local authorities can significantly reduce energy consumption and demonstrate leadership by example. These public projects not only lower emissions and operating costs, but also show citizens that energy efficiency is practical and beneficial. At the same time, municipalities can encourage retrofitting in private housing through subsidy schemes and technical guidance. Financial support helps households invest in insulation and efficient heating systems, but information and trust are equally important. Many residents are unsure which measures are suitable for their homes or how to apply for support. Working with CSOs, municipalities can provide energy advice, outreach and

assistance to vulnerable households, ensuring that retrofit programmes are accessible and socially inclusive.

Modern technologies further strengthen these efforts. Simple tools such as thermostatic valves, smart controls and energy monitoring systems help match heating supply to real needs and prevent waste. In contexts where wood and coal are widely used, every unit of energy saved directly reduces pollution. Retrofit and efficiency measures therefore deliver multiple benefits: cleaner air, lower energy bills and improved living conditions. When combined with strong communication and CSO engagement, reducing energy demand becomes a powerful and cost-effective municipal pathway to healthier local environments.

### **Transition to Cleaner Heating Technologies**

Alongside reducing energy demand, municipalities must support the transition from high-emission heating devices to cleaner alternatives. Many households continue to rely on outdated stoves and boilers that burn coal, wood or low-quality biomass inefficiently. Replacing these with modern, low-emission technologies—such as certified biomass boilers, gas systems where appropriate, or heat pumps—can drastically reduce particulate emissions.

Municipalities that operate district heating systems have an additional opportunity to lead by example. By modernising heat generation facilities and shifting to cleaner fuels or high-efficiency cogeneration, they can reduce emissions at scale and demonstrate the feasibility of systemic change. Such investments, however, are capital-intensive and require careful planning, coordination with national energy policies, and public acceptance.

### **Renewable Energy and Community-Led Models**

Renewable energy sources offer a long-term pathway towards cleaner and more resilient local energy systems. Solar thermal panels, photovoltaic installations and other decentralised technologies can reduce dependence on polluting fuels and lower operating costs over time. Increasingly, attention is turning towards community-led models, such as energy communities and cooperatives, which allow municipalities and citizens to jointly produce, manage and use energy locally.

These models strengthen local ownership and can enhance trust in the energy transition. They also align well with participatory governance principles. However, their implementation depends on legal frameworks, access to finance and technical expertise. In the Western Balkans, further analysis is needed to determine how such models can be integrated into existing regulatory and grid systems.

### **Awareness-Raising and Behavioural Change**

Technical solutions will not succeed without public understanding and support. Heating practices are deeply embedded in everyday life and often shaped by tradition, affordability and habit. Municipalities therefore need sustained awareness-raising strategies that communicate the health impacts of air pollution, the benefits of cleaner heating, and the availability of support schemes.

Civil Society Organisations play a critical role in this domain. Their proximity to communities and their experience in communication and education enable them to translate policy objectives into messages that resonate with citizens. When municipalities work with CSOs on outreach and engagement, measures are more likely to be accepted and adopted.

## 4. IMPLEMENTATION PHASES OF THE PILOT CASE

The pilot case under EU4Green was designed to demonstrate how structured cooperation between municipalities and CSOs can improve air quality through better domestic heating strategies. It followed a phased approach that combined data collection, local engagement and regional exchange.

### **Phase I: Survey Design and Analysis**

The first phase focused on gathering systematic information from both municipalities and CSOs. Two tailored questionnaires were developed. Municipal officials were asked about local heating practices, energy sources, infrastructure, policies and existing or planned projects. CSOs were asked about their involvement in environmental governance, their project experience and their willingness to engage more closely with local authorities. To ensure high-quality responses, municipal questionnaires were prepared in national languages, reflecting the working realities of local administrations. CSO representatives, many of whom operate in regional and international networks, were addressed in English. The responses revealed a high level of interest among municipalities in participating in further activities and sharing their experiences, as well as a strong willingness among CSOs to engage, despite limited formal involvement in many cases.

### **Phase II: Selection and Local Workshop**

Based on availability, willingness, presence of active CSOs, and potential for learning and improvement, a municipality in Kosovo\* was selected for the pilot workshop. The local workshop in Drenas/Gllogovc brought together municipal officials and CSO representatives to exchange experiences on domestic heating, energy efficiency and air quality management.

The workshop combined expert input with local presentations and group discussions. Municipalities shared examples of energy efficiency measures in public buildings, such as schools, and described the difficulties they encountered. These included coordination problems, infrastructure constraints, procurement challenges, financial limitations and low levels of public awareness.

A key lesson from this phase was the importance of creating a respectful environment in which officials and CSOs could speak openly about challenges. Under the framework of opportunities for learning rather than failures, the discussions led to valuable insights and a powerful source of collective problem-solving.

### **Phase III: Regional Online Session**

The final phase extended the learning process to a wider regional audience. A regional online session brought together municipalities and CSOs from across the Western Balkans to share best practices and discuss common challenges. The structure mirrored the local workshop, with expert input, presentation of pilot findings and facilitated group discussions. This phase demonstrated that many municipalities face similar constraints within comparable legal and institutional frameworks. Peer-to-peer learning therefore emerged as a cost-effective way to improve policy design and implementation across the region.

## **5. ROLE OF CSOS IN MUNICIPAL ENVIRONMENTAL GOVERNANCE**

Civil Society Organisations are central to the functioning of participatory environmental governance. Their role in municipal air quality management extends beyond advocacy and into practical implementation, education and monitoring.

### **Contributions of CSOs**

CSOs may act as a bridge between authorities and citizens. They can translate technical policies into understandable messages, raise awareness and in turn bring community concerns into policy discussions. Through awareness campaigns, training activities and educational programmes, they strengthen local knowledge about air pollution, health impacts and energy efficiency. Many CSOs also implement concrete projects, often funded by international donors, that pilot innovative approaches at local level.

In the pilot case, CSOs demonstrated how their networks and expertise could complement municipal action. In schools, for example, CSOs contributed educational activities that supported energy-saving measures and improved acceptance among staff and students, who in turn may influence their families. In this way, they enhanced both the technical and social dimensions of air quality interventions.

## Limitations and Challenges

Despite their strengths, CSOs face significant constraints. Many operate with limited financial and human resources and rely heavily on short-term, project-based funding. Their engagement with municipalities is often informal and dependent on personal relationships rather than institutionalised and reliable frameworks and long-term trust-building relations. As a result, cooperation can be fragmented and vulnerable to political or administrative changes. To fully realise and leverage the potential of CSOs, CSOs require clearer roles in municipal planning processes, stable funding mechanisms and recognition as strategic partners rather than occasional contractors.

## 6. CASE STUDIES AND GOOD PRACTICE EXAMPLES

The pilot activities produced several compelling examples demonstrating how municipal actions and the engagement of civil society organizations can mutually strengthen one another. With regard to good practices in funding, financing models, and practical case studies, this report draws on the [Guidance for Effective Air Quality Management – Developing Local Air Quality Plans](#), developed under the EU4GREEN project.

During the local workshop in Kosovo and the regional online workshop, participants discussed several case studies and best practices. The examples below summarise the best practices from the workshops in general terms.

### Subsidy Programme and Community Trust

Experience from practice shows that when a municipality introduced a subsidy programme covering up to half of household energy-efficiency improvement costs, uptake was initially low despite public advertising efforts. Over time, however, early beneficiaries began sharing their positive experiences within their neighbourhoods. This gradually built trust and led to a significant rise in applications. The example illustrates that social learning and peer influence are critical drivers for the success of technically oriented programmes.

Based on this insight, municipalities should avoid relying solely on formal communication channels. Instead, working together with CSOs to engage trusted community members and promote awareness through local ambassadors for change can greatly enhance outreach and programme participation.

### Municipal Energy Cooperative

The establishment of municipal energy cooperatives to produce and manage local energy has provided valuable lessons. Although such initiatives are legally and technically complex, they clearly demonstrate how community-led models can align environmental objectives

with local economic development. Through this process, the municipality recognised that involving CSOs and citizens early in the design phase is essential to build acceptance and ensure long-term viability.

### **The 50/50 Initiative**

The 50/50 Initiative demonstrated a cooperative model in which CSOs and a municipalities jointly implemented energy-saving measures in public buildings. The financial savings were split between the municipality and the CSO, creating a reinvestment cycle that supported further improvements. This example showed how aligning financial incentives with environmental goals can generate sustainable partnerships.

## **7. KEY RECOMMENDATIONS**

The pilot case and regional exchanges point to several strategic priorities for strengthening municipal air quality management through CSO integration.

### **Promote exchange and mutual learning among municipalities**

The workshop provided a platform for participating municipalities and CSOs to present best practices, exchange experiences, and openly discuss challenges. This facilitated peer to peer learning and created opportunities for participants to draw inspiration from the approaches of others. The in person setting helped municipal representatives build connections, better understand each other's work, and actively engage in dialogue. Participants were encouraged to continue this exchange beyond the workshop and to use the established network to support ongoing mutual learning.

### **Encourage municipalities to openly discuss challenges and difficulties**

At the municipal level, resources are often limited, yet well-designed and well-executed projects can generate wide-ranging positive impacts. Especially in innovative or first-of-its-kind initiatives, unforeseen challenges are normal and can lead to higher costs or longer implementation periods. These situations should not be interpreted as mistakes or failures; rather, they represent valuable learning opportunities for the pioneering municipality and for others who may later adopt similar approaches.

The EU4Green local workshop in XKX showed that openly discussing such challenges does not come naturally. This is not due to any shortcomings on the side of the municipalities, but simply reflects a meeting culture that is still developing. In many contexts, public actors are used to highlighting successes while being more cautious about sharing difficulties—often to avoid misunderstandings or perceptions of blame. However, when municipalities and civil

society organizations work together toward effective air-pollution strategies, transparent exchanges about obstacles are just as important as sharing good practices.

By establishing a workshop setting that clearly emphasized mutual learning, experimentation, and continuous improvement, participants felt more comfortable discussing obstacles in a constructive and solution-oriented way. This demonstrated that, when the environment is safe and well-moderated, municipalities are willing and able to openly reflect on the realities of project implementation.

For this culture to grow, both municipalities and CSOs play an essential role. CSOs must contribute to an atmosphere that is about joint learning—not about assigning blame or seeking new funding opportunities. Likewise, municipalities benefit from the opportunity to discuss challenges as part of a shared effort to strengthen air-quality management.

Cultivating such an open learning culture requires continuous encouragement, careful facilitation, and clear guidance. When the format is respected and supported by all actors, it fosters more effective collaboration and ultimately leads to stronger, more resilient air-pollution strategies.

### **Foster the involvement of civil society organizations (CSOs) and highlight the benefits of cooperation**

As part of the EU4Green presentations, the role of CSOs as established in the Aarhus Convention was explained and highlighted. Practical examples were provided to demonstrate the positive contributions CSOs can make to municipal projects and initiatives. During group work, potential synergies between municipal activities and CSO engagement were explored and highlighted, illustrating how cooperation can enhance project quality, transparency, and public acceptance.

### **Provide further support and information on participatory and community led models such as energy communities and cooperatives**

The Austrian examples of energy communities and cooperatives introduced during the sessions generated strong interest among participants. One municipality even presented their own pilot initiative, similar to the example models, during the online workshop. While EU4Green was able to explain how such community led models operate within Austria's established legal and regulatory framework, it was not within the Pilot Case's scope to analyze whether, or how, comparable models could be integrated into the beneficiaries' existing legal frameworks and energy infrastructures. Additional support in this area would therefore be beneficial.

Finally, sustained investment in awareness and trust-building is essential. Technical measures will only succeed if citizens understand and accept them. CSOs are indispensable partners in this long-term engagement process.

## 8. ANNEX

### Agenda Local Workshop

EU4GREEN

### AGENDA/AGJENDA

#### Workshop/Punëtori:

Municipal Strategies for Sustainable Domestic Heating and Air Quality Improvement

Strategjitë e komunave për ngrohjen e qëndrueshme në shtëpia dhe përmirësimi i cilësisë së ajrit

3<sup>rd</sup> December 2025, Diamant Restaurant, Glllogoc, Kosovo

3 dhjetor, 2025, Restoranti Diamant, Glllogoc, Kosovë

Working Language: Albanian (and English with translation where necessary)

Gjuha e punës: Shqip (dhe Anglisht me përkthim, kur është e nevojshme)

09:00 – 09:30	Registration & Welcome Coffee/ Regjistrimi dhe kafeja e mirëseardhjes
09:30 – 10:00	Opening Session/ Fjala hapëse
10:00 – 11:00	Setting the Scene: Air Quality in Kosovo /Përshkrimi i situatës: Cilësia e ajrit në Kosovë
11:00 – 11:15	COFFEE BREAK/ PUSHIM KAFE
11:15 – 12:30	Best Practice Exchange – Municipal Cases / Shkëmbimi i praktikave të mira
12:30 – 13:30	LUNCH & NETWORKING/ PUSHIM DREXE DHE RRJETËZIM
13:30 – 15:00	Group Work – What is Feasible in municipalities? /Punë në Grup – Çfarë është e arritshme në komuna?
15:00 – 15:15	COFFEE BREAK/ PUSHIM KAFE
15:15 – 16:00	Consolidating Recommendations /Përforcimi i rekomandimeve
16:00 – 16:30	Closing Session/Sesioni mbyllës

## Agenda Regional Online Session

EU4GREEN

### AGENDA

#### Online - EU4Green Workshop Municipal Strategies for Sustainable Domestic Heating and Air Quality Improvement

- **Date & Time:** 16 December 2025, 09:00–12:30 CET
- **Format:** Online (Microsoft Teams)
- **Language:** English (no translation)
- **Workshop Access:** [Link to the workshop \(MS Teams\)](#)

09:00 – 09:15	<b>Opening Session</b> Aim of the workshop
09:15 – 10:15	<b>Presentation of the Municipality Glogoc/Kosovo* Pilot Case</b> Maliq Pireci - EU4GREEN Project Representative Kosovo* Astrid Vertneg - EU4Green Project Questions & Answers
10:15 – 10:45	<b>Online Questionnaire / Coffee Break</b>
10:45 – 11:45	<b>Group Work: Regional Best Practice Exchange</b> Breakout groups for sharing Best Practices, Challenges & Recommendations
11:45 – 12:30	<b>Closing Session - Consolidating Recommendations</b> Questions & Answers

\* This designation is without prejudice to positions on status and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.