Policy Initiatives Booklet

A5.3

Co-funded by
the European Union

Summary of the Project

In the face of environmental challenges such as global warming, pollution, urban sprawl, deforestation and loss of biodiversity which increasingly jeopardise the life of living beings on our planet, the need to raise awareness of environment related challenges among people has now become urgent.

In such a context, adult education plays a critical role in preparing citizens for the future living and in encouraging them to take individual responsibility for protecting the whole communities they live in, in response to global challenges.

Environmental education and awareness-raising for adults can empower informed decision-making, play an essential role in increasing adaptation capacities of communities, and empower women and men to adopt sustainable lifestyles.

Environmental education makes for **responsible citizens** and is key to progress towards a sustainable development. As human effects on our environment progress, more community-based effort is needed.

However, the idea that human health cannot be safeguarded without protecting our planet's biodiversity is still far from being taken seriously, and too often the protection of nature is considered as a secondary objective compared to socioeconomic development.

The Erasmus+ project **"GEA – Growing into Eco-conscious Adults"** intends to encourage people to bring about real change in behaviour and actions starting from their daily lives.

To this aim, GEA partnership designed and implemented a set of innovative and high-quality educational resources addressed to both adult educators and adult learners (especially with disadvantaged socio-economic/educational background), ultimately aimed at raising environmental awareness among adults who are out of formal education, while conveying the importance of social and digital inclusion in the field of adult education.

The GEA project intends to help people understand the impact of environmental challenges and increase "environmental literacy" of adults, by strengthening the capacity of local communities through active environmental education. GEA is promoting education for change, developing critical active citizenship and advocacy for sustainable development, pursuing the following specific objectives:

- **To increase opportunities for adults to engage with their communities in environmental and climate actions while enhancing their ability to think critically**
- **To develop an open e-learning programme for adult educators empowering them to support community engagement for the environment**
- **To develop a set of resources to increase eco-consciousness among adults**
- **To encourage a shared decision-making process and co-design of environmental policy initiatives by applying a multi-stakeholder approach**
- **To ensure wide and sustainable access to the project results among adult learners, educators, CSOs, and policymakers.**

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Foreword

GEA partners designed the booklet with the aim of helping adult citizens to enhance their knowledge regarding the ways we can be active citizens and participate in the decision making. The booklet will encourage a shared decision-making process and co-design of environmental policies at municipal, national and EU level. For this the GEA partners conducted policies measure analysis to identify related policy measures that are taking place in the countries involved in the project.

The research and analysis of these policies will enable future users of the Booklet to understand:

- **Which existing policies aim at protecting the environment in the partner countries?**
- **What are their main goals?**
- **How are they developed?**
- **Who is their target audience?**
- **What positive impacts do they have**

These policies are categorized based on 6 macro-areas and will concern the following sectors:

- **Water saving**
- **Energy saving**
- **Smart shopping & food**
- **Waste management, recycling and upcycling**
- **Active transport & mobility**
- **Shrinking our (digital) carbon footprint**

Through understanding these policies, users of the booklet will be able to develop their own ideas and proposals to be more active in the future. At the same time, the involvement of various stakeholders helps to see how those directly involved in the formulation and implementation of these policies act. The involvement of 15 stakeholders is an important part of the development of the booklet, as it provides the perspective and opinions of those who are responsible for the outcome of each policy.

Moreover, the booklet is a co-design initiative. The involvement of citizens and the creation of roundtables to analyse the policies is an innovation of the booklet and enables citizens to have a significant involvement in the result. In each country, 2 roundtables were organized, involving 5 local community representatives (10 in North Macedonia) including adults from disadvantaged areas, parents, seniors, adult educators and Civil Society Organizations (CSO) delivering environmental education. These roundtables discussed the policy measures identified by the partner organisations,

providing bottom-up input on these policies and thus refining the analysis provided by policymakers, from the citizen's point of view.

The combination of stakeholders and politicians gives the booklet a unique value and at the same time enhances its educational impact. The research results and recommendations contained in the booklet will strengthen the fight against environmental pollution and will give impetus to citizens to engage in environmental protection.

Selected policy segments across 6 countries divided per macro-area

The following chapter will provide insight into various policy segments which were identified in the partner countries during the research that was conducted in the framework of the GEA project. The policies were chosen based on specific criteria such as their innovation, impact, replicability and their way of engaging citizens and CSO in their consultation and implementation. This chapter will assist the user of the booklet to understand how policies and actions that are aimed at protecting the environment can be shaped and what main goals these policies have. Additionally, it will present the target groups of the policies and the impact they have in the local community. The selected policies are divided into the already project-defined macro-areas for ease of use. The complete list of identified policies can be found in the GEA website.

Water saving

General decrees restricting abstraction of water from surface waters during low-flow conditions	
In response to drought and falling discharges, the Lower Water Authority issues a time-limited general decree (Allgemeinverfügung) that restricts or prohibits the abstraction of water from rivers, streams and lakes. In 2025 the decree applied from early July until the end of September (immediately enforceable). Core elements included: prohibition of common-use abstractions for watering/irrigation; exception for hand-scooping with handheld containers; reduced volumes (e.g., −50 percent) and specific time windows (e.g., 18:00–08:00) for permit-based abstractions for food production; suspension of other permit-based abstractions for the duration; fines for infringements under water law. A similar decree was issued in 2023 and amended in late August 2023. Legal bases include the German Water Resources Act (WHG) and the Baden-Württemberg Water Act (WG).	
Aim and target groups	

The policy targets the general public as well as agriculture and horticulture in order to prevent water wasting. At the same time, it preserves aquatic ecosystems of flowing and standing waters (fish and invertebrates) benefit from protected residual flows and reduced thermal/oxygen stress during low-flow periods. In order to do so the policy's main aims are to safeguard ecological functions of surface waters during low-flow conditions (residual flow, oxygen balance, biodiversity). In addition, it aims to adapt in the climate change buy implementing temporary management of competing uses in drought periods. The policy also swifts, district-wide risk management via an immediately enforceable legal instrument (general decree).

Impact and Achievements

The initiative has managed to achieve a short-term relief for water bodies (fewer abstractions → more stable residual flows; lower risk of fish kills). Greater planning certainty was emphasized for agriculture via clear windows and reduction factors. At the same time, necessary restrictions for private and commercial users were imposed for as long as the drought prevails. The approach is readily transferable to other districts/regions with seasonal low-flow problems, using the same legal basis and similar thresholds/timeframes. Key success factors include robust gauge thresholds, close coordination with agriculture, clear public communication (web, municipal notices), and education on water-saving practices and alternatives.

Resilient Skopje: Scaling up for Sustainability, Innovation and Climate Change

The document presents the Green City Action Plan (GCAP) for Skopje, North Macedonia, which outlines a comprehensive upgrade of the city's waste collection and processing system for the period 2023–2035. In addition to waste management, the GCAP identifies and addresses key environmental priorities such as improving energy efficiency in public buildings, enhancing urban transport, managing water and wastewater systems, and reducing local pollution. The overall aim is to boost energy and resource efficiency while supporting climate change adaptation. The plan was developed with strong backing from the mayor and city administration as part of Skopje's participation in the EBRD Green Cities program.

Aim and target groups

GCAP identifies a broad set of target groups and final beneficiaries. Reflecting on the plan's cross-sectoral approach to urban sustainability, the implementation of the GCAP targets: city authorities, public service providers and utility companies as well as residents. Its main goals are to improve air quality, reduce pollution, enhance energy and resource efficiency, and strengthen resilience to climate change. The plan targets key sectors such as urban transport, waste management, water and wastewater services, and energy use in public buildings.

Impact and Achievements

Key effects include a projected 30–50% reduction in PM10 and PM2.5 levels through cleaner transport, energy-efficient buildings, and improved waste systems. The

planned €25 million investment in waste infrastructure will significantly reduce landfill dependency and illegal dumping. The GCAP also improves flood resilience and climate adaptation for over 500,000 residents, especially vulnerable groups, while opening opportunities for green jobs and investment. The Green City Action Plan for Skopje can be extended more widely through regional replication, integration into national policies, and cross-municipal cooperation. Its structured approach and measurable outcomes make it a model for other cities to develop similar plans. National ministries can also use GCAP insights to shape country-level green urban strategies.

Energy saving

Group purchases of green electricity & Municipality for the Future

The province of West Flanders supports group purchases of green electricity (active for 13 years) and guides local authorities in *Municipality for the Future* (shared mobility, food loss, greening). Regional landscapes are also strengthened, and communication campaigns are conducted around solar panels.

Aim and target groups

Key objectives of the policy are to sustainable energy production and consumption in the area and strengthening greening and water management. Moreover, the policy aims to support local authorities in climate adaptation as well as encouraging citizens to change their behaviour. In order to do so, the policy's main targets are the local authorities and farmers, families so they can achieve lower energy costs. Schools are also part of the plan so they can introduce climate adaptation measures

Impact and Achievements

The policy has supported 75,000 families to switch through group purchases and adopt greener electricity. Greening of playgrounds and construction of climate-adaptive zones have been created for promoting a sustainable way of living. Additionally, extra solar panels on top of long-term average through a new campaign have been installed. The initiative can be adopted by other regions particularly the group purchases and campaigns. Evaluations of the policy follow a plan-do-check-act cycle, so that improvements can be built in

Operation and periodic in-depth safety inspection of the Breitenauer See flood retention basin (HRB)

The Breitenauer See is a man-made flood retention basin (HRB) on the Sulm and part of a regional system of retention structures. Its construction was politically initiated after a series of severe flood events in the Sulm valley (notably in 1970). Due to this the decision was made to create a dam to prevent flooding. The measure is therefore not merely preventive but a direct response to repeated flood damage affecting

communities and major employers in the region, where site relocation was reportedly discussed. Such a structure needs frequent operation, this is why an operation and periodic in-depth safety inspection frequently takes place. The operator carries out periodic in-depth safety inspections as required for dams and flood retention structures; for this purpose, the reservoir is completely drawn down, dam structures and appurtenances are inspected, and necessary refurbishments are executed (most recently during 2020/21), including temporary closures of the lake area for works and public safety.

Aim and target groups

This decision affected directly many target groups such us residents and businesses that were no longer in danger by the floods. Moreover, it targets energy companies that could provide renewable energy to the region that will have as result the lowering the CO2 emissions that combustion units produce. The main objectives of this project are primarily the reduction of flood risks by attenuating peak discharges. As well as the protection of infrastructure, property and jobs in the valley (site/industry resilience). At the same time, it is legally compliant dam safety through periodic in-depth inspections and maintenance.

Impact and Achievements

The continued operation and inspection of the dam provided a sustained improvement of flood protection in the Sulm catchment and reduced damage during heavy rainfall events. Moreover, brought economic co-benefits through reduced flood-related production interruptions and improved location security for employers. The inspections and refurbishment works are also including ecological accompanying measures (e.g., fish relocation) as required. The combined operation, inspection and refurbishment regime is transferable to other catchments with comparable dams/HRBs, provided that governance (e.g., a water association), funding, and ecological accompanying planning and public communication are in place.

Tauragė District Municipality Climate Neutrality Strategy until 2030

This long-term strategy outlines Tauragė District Municipality's path toward climate neutrality by 2030. The strategy comprises an action plan and investment roadmap across key sectors (transport, energy, waste, agriculture, and land use). It includes both technical measures (e.g., renewable energy development) and social innovations. A participatory governance model was introduced to coordinate stakeholders and ensure transparent implementation.

Aim and target groups

The strategy targets a wide range of stakeholders across the municipality. These include residents, municipal authorities, businesses (especially those in energy, transport, and agriculture), institutions and non-governmental organisations. Special attention is paid to engaging youth, socially vulnerable groups and residents interested in contributing to climate action. The policy also aims to include representatives of national ministries and public service providers, ensuring multi-level collaboration.

The primary goal of the strategy is to achieve climate neutrality in Tauragė District by 2030. It addresses key environmental challenges such as high GHG emissions from transport, energy use and waste management. It also tackles structural issues such as limited financial resources, technological gaps and lack of expertise in climate planning by introducing governance innovations, improving institutional capacity and enhancing community-level climate literacy.

Impact and Achievements

While still in the early implementation phase, the strategy is expected to result in a substantial reduction in GHG emissions—up to 85% by 2030. The strategy is highly transferable to other Lithuanian municipalities and EU regions aiming for climate neutrality. Its integration with broader strategic frameworks, including the National Energy and Climate Action Plan and the European Green Deal, allows for alignment with funding and regulatory mechanisms. The participatory and modular design of the strategy—combining technological innovation with social engagement—makes it suitable for replication in both urban and mixed rural-urban contexts.

Smart shopping & food

First in Attica for Recycling

The Municipality of Metamorfosis has launched an innovative comprehensive recycling policy, "First in Attica for Recycling," which aims to promote mass and individual recycling by citizens. The policy promotes the recycling of paper, plastic, and aluminium. In addition, it encourages the recycling of used oils and composting, especially in the municipality's open-air markets, through the use of separate recycling bins.

Aim and target groups

The initiative is supported by various municipal sectors and civil society organizations that focus on the environment and recycling. The main targets are firstly the residents of the municipality and secondary the food producers that are selling products in the fleet markets. The policy tackles the increase in the volume of waste ending up in landfills, the pollution of air, water and soil as well as the waste of food products. The goals are to reduce waste, and especially the waste of used oils and food, to improve recycling of waste and to improve composting of biodegradable waste. Moreover, it aims to educate the citizens on the positive aspects of recycling.

Impact and Achievements

The policy is expected to reduce waste production in the area, improve the rates of recycling around +70%, improve the rates of composting, especially in open-air markets and reduce food waste. In addition, the policy will upgrade the standards of living in the municipality. Similar policies can be implemented in many municipalities of urban areas that need to decrease their waste and increase their waste management. The policy can be modified based on the needs of each municipality. However, such policies need a top-down approach from the central government.

Waste management, recycling and upcycling

Waste management and circular economy in Oostkamp

The municipality of Oostkamp pursues an ambitious waste and sustainability policy with a focus on waste reduction, litter control, shared mobility, water management and cooperation between agriculture and nature. The most important measures are: the transition from residual waste bags to containers, intermunicipal cooperation on recycling parks, cigarette but trays at events, the introduction of shared cars and bicycles, and agro-ecological initiatives (such as hedges, strip cultivation and erosion control). The policy is trying to address the reduction of residual waste to max. 90 kg per inhabitant by 2030 by combating also illegal dumping, litter and especially cigarette butts. Moreover, it aims at improving water management and buffering at construction sites. Lastly, it is reconciling agricultural and nature interests through consultation and agro-ecological measures as well as creating support and awareness through education and participation.

Aim and target groups

The policy targets the whole residents of the Oostkamp, particularly multi-family dwellings, event organisers and visitors in smoking areas as well as schools to increase education and behavioural change through awareness-raising.

Impact and Achievements

The policy has managed to reduce residual waste production, approx. 131 kg per inhabitant, on the way to reduction by introducing containers. With regard of water management and agricultural-nature relations the effects are still limited. Furthermore, there is a visible decrease in cigarette butts during events after introduction of cigarette butt trays. The policy has also achieved involvement of schools and children in waste education as well as shared cars and shared bicycles increasingly used, especially in multi-family homes. The intermunicipal recycling system can easily be scaled up to other municipalities. The model with cigarette butt trays and cooperation with organizers can be applied to multiple events. Water management projects can draw inspiration from international examples such as the projects in the Netherlands. Lastly, the exercise for consultation between agriculture and nature can serve as a model for other municipalities with areas of tension between agriculture and ecology. Overall, the policy is highly replicable with a good chance of success.

Zero Waste Skyros

Based on the example of the island of Tilos, the municipality of Skyros is planning to implement a Zero Waste plan, to ensure that most waste is upcycled or recycled, and that non-biodegradable and non-recyclable waste is kept to a minimum. The policy has

two main target groups, the residents of the island and the tourists that are visiting it. The policy tackles the huge issue of waste management on the island, an issue faced by most islands in Greece.

Aim and target groups

The goals are to reduce waste, and especially non-biodegradable and non-recyclable waste, to improve recycling and upcycling of waste and to improve composting of biodegradable waste. Through these, the municipality will be able to protect the island's natural environment.

Impact and Achievements

Therefore, it is expected to have reduced waste production and improved rates of recycling (85-90% of waste) in the upcoming years. Furthermore, they will improve rates of composting, particularly from restaurants and tourist businesses that operate on the island. The municipality wants to have a diminished strain on the island waste management infrastructure during the tourist season. Policies like this are possible to be implemented in other areas, especially on islands or small tourist destinations, that need solutions to manage their waste flows and protect their natural environment.

Involvement of unemployed people in common green areas

The Municipality of Termini Imerese created a network of cooperation with the local employment agency, to involve unemployed people who are currently waiting to find an occupation in activities for the community, especially focused on green and social activities.

Aim and target groups

This policy has two main targets, the direct one that are unemployed citizens that can benefit from the policy and the indirect which is the city. The policy aims to improve several areas of the city that would otherwise remain unattended and provide previously non-existent services due to lack of personnel and funds. Employ people looking for a job in this process, to improve their skills or simply their morale.

Impact and Achievements

The policy has shown its effectiveness in the city. Several green areas that were previously abandoned were restored, public areas became cleaner, some entirely new services were created, such as babysitters after school for working parents. Moreover, some of the people involved in this process were later employed in the field they were operating in or rediscovered some personal passions. The municipality's initiative can be adopted by other municipalities around Europe. More people looking for a job could be involved in the action to improve the coverage and fields of support for the city and its inhabitants. This may create more opportunities for people looking for a job to get involved in virtuous mechanics to improve self-esteem, develop potential working skills and open opportunities for employment. Furthermore, such initiatives may lower the energy consumption of the municipality since the restoration of abandoned places bridges new installations for light like energy-efficient lighting (e.g., LEDs), solar lighting and/or automatic sensors that reduce the energy use.

Sorted waste policies

The Municipality of Sambuca realized a complex framework of actions to boost the realization of sorted waste among the citizens. The actions mainly consisted in informative campaigns and prizes to the citizens, proportionally to their dedication to the achievement of results. With these actions, the municipal archive provides incentives to residents to sort waste better and with more dedication.

Aim and target groups

The initiative aims to push the citizens that are the main target group to achieve the highest possible level of waste sorting. So far, the municipality has achieved in 2025 a percentage of 85.7% of waste sorted, simultaneously pushing for greater involvement of the citizens in collecting waste, which also allowed for much lower costs for the collection for the public authority.

Impact and Achievements

Therefore, this specific approach, not only helped to reduce waste pollution but also significantly reduced the energy and carbon footprint of the municipality as the participation of citizens reduced the use of machinery needed for cleaning and collecting waste. The same strategies can be adopted by other towns and smaller cities or areas of a larger city. The Municipality of Sambuca is currently aiming at multiplying the impact to reach 90% of sorted waste.

Green Cities Action Plan – SW-4: Waste Infrastructure Upgrade

The document presents the Green City Action Plan (GCAP) for Skopje, North Macedonia, which outlines a comprehensive upgrade of the city's waste collection and processing system for the period 2023–2035. In addition to waste management, the GCAP identifies and addresses key environmental priorities such as improving energy efficiency in public buildings, enhancing urban transport, managing water and wastewater systems, and reducing local pollution. The overall aim is to boost energy and resource efficiency while supporting climate change adaptation. The plan was developed with strong backing from the mayor and city administration as part of Skopje's participation in the EBRD Green Cities program.

Aim and target groups

The GCAP for Skopje identifies a broad set of target groups and final beneficiaries. The policy targets: Skopje's city authorities and administration responsible for decision-making, policy implementation, monitoring, and coordination as well as international partner, donors and local residents or over 500 000 people, vulnerable groups, future generations and others that will benefit from clean air, water, soil, safer public services improved urban infrastructure.

Its main goals are to improve air quality, reduce pollution, enhance energy and resource efficiency, and strengthen resilience to climate change. The plan targets key

sectors such as urban transport, waste management, water and waste. The policy is proposing infrastructure upgrades, green investments, and policy reforms covering the period between 2023 and 2035. It also aligns with EU's environmental standards and supports Skopje's commitment to the EBRD Green Cities program, offering a roadmap for cleaner, safer, and more climate-resilient urban development.

Impact and Achievements

Key effects include a projected 30–50% reduction in PM_{10} and $PM_{2.5}$ levels through cleaner transport, energy-efficient buildings, and improved waste systems. The planned €25 million investment in waste infrastructure (sorting, recycling, waste-to-energy) will significantly reduce landfill dependency and illegal dumping. The GCAP also improves flood resilience and climate adaptation for over 500,000 residents, especially vulnerable groups, while opening opportunities for green jobs and investment. These outcomes position Skopje to meet EU standards, reduce health risks tied to pollution, and strengthen long-term urban sustainability.

Active transport & mobility

Skopje's sustainable urban transport plan

The Plan for a sustainable transport system (SUMP) was adopted by the city council of Skopje in 2011. The plan was developed with the main objective to offer a long-term strategy for sustainable urban mobility that will address the growing challenges faced by residents and stakeholders, and the need for better local transport services. The SUMP focused on reducing the traffic congestion in the city by encouraging a shift towards public transport and non-motorised modes of traveling such as cycling and walking, including raising public awareness about the benefits of collective transport. The plan also focused on improving the overall traffic management throughout the city and ensuring better connectivity and access to alternative modes of transport. The adoption of the plan marked a significant step forward by promoting broad stakeholder engagement and laying the foundation for more inclusive and strategic transport policymaking.

Aim and target groups

Key beneficiaries and target groups of Skopje's SUMP were the residents and the peripheral areas. As well as all urban commuters such as daily travellers, cyclists, private car users, public transport operators and workers, local businesses, vulnerable groups such as children, people with special needs and others. The main objective of the SUMP was to influence people's travel behaviour by addressing their dependence on cars and offering them a cleaner, safer, efficient and more accessible, urban mobility model. The plan focused on specific measures that aimed to tackle the unsatisfactory level of Skopje's public transport services; to improve the transport infrastructure, especially pedestrian and cycling infrastructure.
In addition, the plan focused on encouraging sustainable transport access to the sites of historic and cultural values across the city, as well as aiming to tackle congestion,

air pollution, and various infrastructure related challenges such as limited parking space, uncontrolled parking and other.

Impact and Achievements

The plan was the first ever plan for sustainable urban transport in the country developed with a high level of stakeholder engagement which marked the beginning of participatory local mobility planning and decision-making. The process engaged employees from relevant departments within the local government such as the department for transport, relevant professional associations and NGOs that were called to actively participate into forming the final version of the Plan. SUMP has demonstrated strong potential for a wider application in other cities and countries facing similar urban mobility challenges. Key strength of the document lies in its practical and adaptable framework, which focuses on improving public transport, promoting walking and cycling, regulating parking, reducing air pollution, and engaging citizens and stakeholders in decision-making processes. SUMP has evolved from a local policy to a national and regional reference point for sustainable mobility planning.

Shrinking our (digital) carbon footprint

Resilient Skopje: Scaling up for Sustainability, Innovation and Climate Change

The Green Cadastre is a GIS-based registry (framework) cataloguing all public trees, shrubs, and green corridors in Skopje. The framework includes species identification, height, health status, geo-coordinates, and canopy coverage. Initially conducted in phases it supports green corridor planning, environmental monitoring, climate resilience, and urban nature management. The cadastre also underpins the Green City Action Plan (GCAP) objective to mitigate urban heat islands, reduce air pollution, preserve biodiversity, and support urban planning decisions.

Aim and target groups

The Green Cadastre targets the city's administration, urban planners, public enterprises, and environmental professionals by providing an inventory of urban greenery for better planning and management. Final beneficiaries include the citizens of Skopje—who gain cleaner air, more green spaces, and reduced urban heat—along with local communities, and future generations benefiting from improved urban sustainability and climate resilience. The main goal of the Green Cadastre policy is to systematically map, monitor, and manage all urban greenery in Skopje to support sustainable urban planning, improve environmental quality, and enhance climate resilience. It tackles key issues such as the uncontrolled loss of green spaces, lack of data for informed planning, urban heat islands, poor air quality, and the need for biodiversity protection in the city.

Impact and Achievements

The Green Cadastre has led to several important effects and impacts. It has enabled the City of Skopje to register and monitor tens of thousands of trees and green areas, improving transparency and data-driven urban planning. This supports the preservation and expansion of green spaces, helping reduce air pollution and mitigate urban heat. The cadastre strengthens climate adaptation efforts, guides sustainable

infrastructure development, and increases public accountability in protecting urban greenery. It also empowers municipal services to better maintain green assets and plan future interventions more effectively.
The Green Cadastre policy has strong potential for wider application. Nationally, it can serve as a model for other cities to strengthen green space management under the national Law on Urban Greenery. Regionally, the system aligns with EU urban greening standards and could be adopted in other Western Balkan cities through programs like the Green Agenda for the Western Balkans or the Covenant of Mayors. Its low-cost, scalable GIS structure makes replication both feasible and impactful. Skopje's Green Cadastre is an initiative that contributes indirectly through the investment in greener spaces to shrinking the overall carbon footprint, particularly the urban and environmental carbon footprint.

Plan for Improving Air Quality in Skopje Agglomeration

The Plan for improving the air quality in the Skopje agglomeration is an EU-financed (IPA) strategic and operational plan developed & introduced in 2017 by the city of Skopje, the Ministry of environment, the Finnish Meteorological Institute, the Austrian Environment Agency, and Technolab. The Plan combines a series of measures such as legal obligation, science-based source analysis, real-time monitoring, public engagement, and financial incentives. Its main objective is to produce tangible outcomes such as a strategy for air pollution reduction in Skopje and its surrounding municipalities, including assessment of the air quality based on national regulations and monitoring data from seven stations across the region.

Aim and target groups

The plan brings benefits to the entire population in the Skopje region, including vulnerable groups such as children, elderly, respiratory/cardiovascular patients, and others. Furthermore, the plan targets diverse stakeholders such as transport related enterprises, authorities, local administration, households, and various industries in the region.
The main goal of Skopje's air quality plan is to improve the air quality in the region and to protect human health and the environment, in accordance with the national air quality legislation. The plan addresses key sources of pollution, primarily household heating, which is a major contributor to particulate matter pollution, particularly through measures such as replacing outdated heating appliances, restricting the burning of wood, and promoting energy-saving practices.

Impact and Achievements

As a result of the policy and the envisioned measures: air quality stations have been installed and integrated into data systems; subsidies for eco-heating, chimney cleaning, and green transport have been launched; and a practice of annual reporting has been established to the City Council and the Ministry of Environment. Skopje's air quality plan is applicable to other agglomerations, and as such has been used as a good example by other municipalities such as Tetovo, Bitola, Ohrid.

Tauragė City Greening Plan	
The Tauragė City Greening Plan is a strategic document aimed at increasing green areas across the city. It provides an assessment of the current green infrastructure, identifies problematic and priority zones for intervention, and proposes targeted actions to improve ecological quality, climate resilience, and public access to nature. The plan supports long-term urban sustainability through nature-based solutions and aims to integrate greenery into urban development in a systemic and inclusive way.	
Aim and target groups	
The primary beneficiaries of the policy are the residents of Tauragė City, including vulnerable groups such as children, the elderly, and people with health conditions. Urban planners, environmental specialists, and local public service providers are also key stakeholders, alongside future generations who will benefit from a more live able and climate-adapted urban environment. The main goal of the plan is to enhance urban resilience to climate change by expanding and improving green infrastructure. The policy addresses urban heat island effects, air quality, biodiversity loss, and insufficient access to green spaces. It also aims to promote environmental justice by ensuring that greenery is available across different neighbourhoods, especially those with higher social vulnerability.	
Impact and Achievements	
If fully implemented, the plan is expected to increase the total green space in the city by 10%, reduce the negative effects of heatwaves, improve air and soil quality, and support biodiversity. Long-term impacts also include enhanced carbon sequestration, increased public satisfaction, and greater urban sustainability. In this way the carbon footprint of the city will shrink, and the city will move towards a greener future. The methodology and principles could be adapted by other municipalities facing similar challenges. Integration of this plan with broader regional or national climate adaptation strategies is also feasible. Its emphasis on participatory planning and spatial equity makes it a strong candidate for replication in cities committed to nature-based solutions and sustainable urban transformation.	

Lessons learnt

The policies mentioned can of course be categorized in different ways. Many of them do not have a single purpose but aim to cover several of the macro-areas mentioned in the booklet. What is important to take away from the policies that were researched is that:

- These policies involve various stakeholders and citizens. Multi-stakeholder engagement is essential to achieve the goals of the policies and to develop the necessary environmental awareness.
- Innovation in implementation plays a role both in terms of results and in terms of inclusion. Policies that have social innovations can have better results and enhanced public involvement.

- For a policy to be replicable, it must have clear objectives and ways to measure them. Examples such as the “Skopje’s sustainable urban transport plan” show how a policy can move from local to national while achieving key objectives.
- Environmental policies must also have social goals. In addition to citizen engagement, policies must also provide an educational character to the beneficiaries and a social benefit to be fully successful.

Results of consultations with policymakers

This section provides an analysis of the discussions held with various stakeholders during the development of the booklet. The consultations concern the policies analysed in the previous chapter and the way the stakeholders implemented the policies, as well as the reactions that society had to them. The stakeholders who participated consisted of mayors, municipal representatives, policy implementers, heads of departments and project supervisors. The aim of this section is for users of the booklet to understand:

- the ways in which support and public visibility was reached
- the emerging problems and resistance that may have occurred
- the policy impact and further needs

Support and public visibility

The consultation with the stakeholders provided some interesting insides on the ways that they try to increase public visibility and support for their policies. After all, the environmental policies do not stand a chance without the active involvement of the public. Many of the interviewees mentioned the use of informational campaigns and distribution of printed materials that can later be recycled. Informative leaflets can provide the information to the beneficiaries and reach out the public either by home delivery or in a flyer distribution at public spaces such as fleet markets and/or commercial streets. A stakeholder also mentioned that when it comes to composting or waste management it is a nice gesture to send together with the flyer a set of garbage bins to motivate the people. A door-to-door information campaign has also shown positive results, although you need to have the necessary staff to do it and usually municipalities do not have such capacity if they are operating in a small region.

Additionally, events that can enhance public engagement are among the most common ways to gain visibility. Many stakeholders mentioned that the regular participation in environmental events or the creation of an event on key dates like the World Environment

Day can increase the visibility of the policies and their goals. These events included in their agenda short theoretical segments that can spark discussions, followed by open problem-solving talks, which keep public engagement high. Moreover, opening and closing events organized to mark the beginning and end of strategy development as well as events during the implementation in order to show progress, can increase visibility, recognition and bring more supporters onboard. At the same time, interviewees pointed out that events should have a more communal character and not the classic isolation character that often makes the public deny a change. Community level activities such as compost given out at fleet markets to show the tangible benefits of recycling or visits to schools to educate and engage children on recycling and sustainability change the narrative and enhance the outcome of a policy while educating the public.

The visits in schools and the involvement of educational protocol provided possibly by NGOs can play a significant role in the support of environmental policies. The education of younger generations with the aim to familiarize them with sustainable practices from an early age increases the public support of younger generations. The municipalities again do not have the capacity to do this on their own since their staff is limited, this is why the involvement of NGOs who operate in the field of education and environment can prove useful in the increase of support and visibility of green policies.

Emerging problems and resistance

Policies concerning environmental protection often ask people to change some harmful habits they had and/or to adopt new habits in their daily lives. Although the changes are intended to improve the standard of living of individuals and make their lives more sustainable, many times these changes bring reactions which in turn create obstacles to the implementation of the policies. In the interviews we had with stakeholders, we asked them to refer to reactions that they had encountered as well as ways in which they were able to mitigate them.

Among the main problems encountered by the policymaker is the lack of capacity and the enforcement limits that they have. Municipalities, particularly the ones that are in small rural areas, often find themselves with a lack of technical, financial and human resources power to enforce their green policies. The issue is most evident in areas where people continue to do illegal waste burning, use unauthorised dumpsites and inadequate septic systems remain widespread. Despite their efforts, as they mention during the interviews, these kinds of challenges are difficult to deal with and need further support from the central government, especially regarding the financial part that affects all the others.

Additionally, resistance is common when the proposed measures are affecting economic interests and daily habits. The most common changes that citizens must adjust are

related waste sorting, composting, or rate increases for waste management. These changes require time and education for the public to be able to introduce them in their lives; therefore, resistance often occurs but not in a direct way. As a stakeholder mentioned, sometimes resistance appears indirectly through low compliance rather than open objection, for example when the introduction of composting was introduced many times instead of composting materials, they were finding other waste that should have been in other bins.

The above resistances are most of the time related with the lack of communication between the authorities and the citizens. While we saw that the stakeholders are trying to increase visibility and public support with their actions, something this is not enough, or it does not have the needed impact. When this happens, the residents may consider the measures unnecessary or design in such a way that will not have the promised result. Moreover, interviewees point out that there is commonly a lack of trust towards such policies due to previous failures or untransparent ways of implementation. Transparency and initiatives that enhance dialogue (as shown by the Tauragė example), help to clarify such issues and increase trust between citizens and local authorities.

It is also crucial to have in mind the cultural background of the people. The participants in the interviews identified that it is important to understand the cultural background of the residents that you are addressing since many of their habits such as improper waste disposal may be deeply rooted in their cultural habits. To tackle such issues, the majority of the stakeholders agreed that there is a need for educational programs that will provide guidance and scatter prejudices and stereotypes.

Impact and needs

The impact according to the stakeholders has many aspects and can be found in different areas of daily life. Policies related to environmental protection may impact on the resilience of a place by improving infrastructures. Examples such as investment in the green areas, abandoned places and road networks can improve the area and clarify responsibilities among engaged stakeholders. Additionally, policies that lower the environmental risk and aimed at the closure and revitalization plans when it comes to illegal dumpsites, and environmental assessments such as for composting facilities in Skopje or in Metamorfossis addressed pressing waste and pollution challenges.

Another important aspect of the policies was the impact that it had in the citizens' engagement. Although citizen engagement is not an easy achievement and, as previously mentioned, often met with resistance, it remains one of the most important policy objectives. In several cases, as reported by interviewees, engagement was achieved through incentives like vouchers for youth, eco-points and tax reductions. These incentives motivated citizens to separate and deliver waste and to support

environmental policies more actively. In addition, several stakeholders reported that local initiatives such as distribution of recycling bags, installation of reverse vending machines and school education programs encouraged everyday recycling habits, resulting in a positive impact on the environmental plan. In some cases, as the policymakers reported, when citizens had an active role in urban planning and implementation, either through tree planting and awareness-raising actions, this strengthened environmental awareness and accountability.

At the same time, some policies also had an educational impact on their citizens, resulting in strengthening their environmental awareness and building a more social inclusion character around the initiative. Furthermore, policies such as those implemented by PUCs such as in Termini, were able to help unemployed fellow citizens to strengthen and develop their skills. The involvement of unemployed residents of course, as noted, was short-term with relatively low time requirements, however since PUCs were compatible with vocational education and training, they operated in such a way that some of them found work.

Lastly it is important to mention that many stakeholders agreed that strategic planning and cooperation between different municipalities and stakeholders can improve impact on the local society. Shared projects among municipalities can strengthen cooperation between them and increase the replicability of a policy. This can lead to effective waste management and coordination in environmental action like in the city of Skopje that is continuously collaborating with other municipalities. Moreover, long term planning like Tauragė's climate neutrality and greening plan or Skiros' Zero Waste policy, can provide long term tools and infrastructure that will increase the sustainability of an area.

Results of consultations with local environmental committees

The chapter will provide an analysis of the discussions held with local environmental committees in the partner countries during the development of the booklet. The consultations concern the policies analysed in the chapter and the way the local environmental committees perceive them. The local environmental committees were composed from organisations that have promoted environmental actions and active citizens and nonactive ones that are willing to engage in environmental actions and discussions. The discussions of the local environmental committees took place in the form of roundtables. Each roundtable was composed of at least 5 participants, overall 98 individuals participated in the discussions. The discussions were fruitful and were shaped around:

- Policy awareness and the outcome it has or may have;

- Issues arising and possible resistance from the local community;
- Involvement of the local community in the decision making process;
- Replicability of the policy and further needs.

The participants, through dialogue, presentation of ideas and reflections, analysed the policies and identified the needs for further development of environmental policies. Above all, local committees are essential to strengthen the presence of citizens in the decision-making process.

Policy Awareness

Awareness of a policy by residents is extremely important, especially in policies concerning the environment as without residents there can be no substantial success. During the roundtables, the participants of the local environmental committees reported that they were aware of some of the policies. For example, in the case of HRB all participants were aware of it as they had been affected by floods in the past and were happy that the initiative was protecting settlements and infrastructure. In other cases, they did not have a clear picture from the beginning but through the discussion they realized that they knew about the policy under discussion and considered it a good opportunity to learn more about it and its results. Their knowledge mostly came from the mass media, which often, as some mentioned, do not provide all the information and as a result they do not have a full understanding of the challenges or the impact.

In several cases, awareness was limited to visible activities at community level without further knowledge of the impact of the policy. The observed results such as cleaner neighbourhoods, better waste management or improved public spaces were in many cases easy to measure. The participants in the roundtables almost universally agreed that policies such as the ones discussed, which aim at sustainable living and environmental protection, are important for the sustainable future of a city. However, they were stressed that a positive impact depends on proper implementation, something that cannot happen when residents are not included in the consultation.

Across the discussions, participants expressed that these policies are attractive in theory but need a better communication strategy to be effective. Additionally, participants pointed out that it is important to provide education to both stakeholders and citizens as well as follow-up activities. Simply providing information online is not enough, so authorities need to explain it in direct contact with residents and design policies in a way that helps them and not punishes them.

Arising issues and resistance

The local environment committees during the roundtables discuss a lot about arising issues that the policies may bring and possible resistance that may occur in the process of the policy implementation. The most common concern expressed by the participants were concerns regarding policies linked to money. Many participants expressed resentment over rising environmental taxes that these policies can bring and costs that disproportionately affect rural residents. This is linked also to the trust the residents have toward their municipalities. Many participants expressed that they often feel their voices are not heard, bringing examples of tree cutting in places that have lack of green areas, reduced electric vehicle use that can lower CO2 emissions and/or inadequate recycling practices without proper information or education towards the residents. This can lead to apathy or passive resistance from the residents that in some cases leads to their resistance to follow the measures as they believe nothing will change or they strongly oppose them.

Problems can also arise from poor management of a policy, particularly when trying to implement a small-scale policy on a large-scale without taking the necessary steps. This, as some participants mentioned, can lead to backlash both within the authority due to staff shortages and among citizens who see a poor investment that is not paying off. A typical example of such backlash is the resistance that citizens bring to green transport policies, which when these are not sufficient or frequent or modern then car owners do not prefer them. Resistance can also arise from citizens' ignorance. Many residents are unaware of how they should dispose of their waste, what bins are used for each material, and most importantly, how recycling works. These knowledge gaps create scepticism and undermine the policies that are implemented.

At the same time, the low environmental culture that prevails in some areas acts as a counterweight to environmental protection policies. As mentioned in the roundtables, due to the lack of environmental culture, several political actors do not proceed with protection policies as they believe that they will lose votes from the public's reactions. In order to overcome such reactions, according to local environmental committees, a strategy is needed that aims at communication so that the policies followed are clear and in education, by public authorities in collaboration with CSOs, to mitigate the knowledge gap that exists among citizens.

Involvement of the local community in the decision-making process

The involvement of the local community in the decision-making process is of utmost importance if the authorities want the policy to succeed in its purpose. In order to achieve

the necessary involvement of the local community, the participants agreed that there is a need for closer contact between municipalities and their citizens. Specifically, it was pointed out that municipal authorities should come into frequent contact with the public either through organizing events in squares and social spaces, or by visiting public spaces such as markets and not only seek them out during the election period. Additionally, the already existing networks such as cultural clubs, local associations, youth groups and CSOs should have a more active role both in policy consultation and in dissemination and feedback as they are the ones who are on a permanent basis close to citizens.

Furthermore, it is very important for participants to have structured communication strategies. The information must reach residents in a complete and understandable way. Since residents have the whole information without gaps, they will be able to be more active as they will be aware of what is happening in their area. Investments must also be made in the field of education and awareness. The introduction of environmental topics in schools and cultural centres as well as joined activities with CSOs that focused on neighbourhoods will create a sense of engagement and empowerment in adults and children. What is more is to have transparency is the whole process. The authorities need to win the trust of the residents so they can engage them. Clear and practical household tips in combination with plain explanations of the policies can reduce confusion and increase the interest of the people. Moreover, rewards and incentive mechanisms although some participants do not find them appropriate, like lower municipal fees and direct involvement in new programs of the municipality can create conditions for further engagement.

Generally, the groups agreed that continuous dialogue is the key to public involvement. On the other hand, the groups also discussed the responsibility of the citizens to be active. Some participants mentioned that even obliging residents to adopt greener practices in some cases should be implemented otherwise they will not comply. Despite their different thoughts, participants believe that supporting local groups in any way possible to activate grassroots participation is what will bring change in the residents' involvement.

Replicability of the policy and further needs

The policies discussed were considered potentially replicable in other regions. Most of the participants agreed that it is possible, especially for policies that focus on drought, flooding, or waste management, to be adopted by other regions. However, several indicated that replicability depends on local factors. The size of the municipality, the staff and especially the financial resources available are key factors in the replicability of a policy. In order for any policy implementer to be successful, it must take these factors as well as the local community into very serious consideration.

Besides these, the participants consider that there should be necessary exceptions from the implementation of some policies, where these are deemed to be necessary in order not to suffocate the local community. This requires coordination between neighbouring districts, possibly involving local bodies. On the other hand, the frequent overlapping of responsibilities between municipal and regional levels can hinder replication. Authorities must have clear roles among themselves so as not to create confusion in the community.

Finally, all actions must be accompanied by a corresponding investment in citizen education, putting in place long-term implementation plans. Participants also stressed the importance of stronger public involvement and tangible results on the ground to build trust.

Recommendations for co-designed policy initiatives

The consultation carried out during the GEA project revealed the potentials that environmental policies have but also, the challenges that they possess in their implementation. The insights gathered through consultations with policymakers and local environmental committees emerged several recommendations for the co-design of future environmental policy initiatives. These recommendations aim on the one hand to combat the emerging challenges and on the other hand to support municipalities and local communities in co-developing policies that are more inclusive and sustainable. Based on these frameworks the following recommendations and actions can be proposed:

- **Communication strategies** should be integrated into the implementation of policies. The messages that citizens receive should be **clear, comprehensive in plain language** and transmitted both by **traditional transmitters** such as newspapers and social media and by **local bodies** such as CSOs, youth/cultural clubs, etc.

- Embedding **education** and **awareness-raising activities** can make a notable contribution to policy implementation. The integration of environmental education programs into **schools, cultural centres**, and **neighbourhoods' activities** will increase citizen awareness and build long-term awareness. Joint efforts between **municipalities** and **CSOs** can close knowledge gaps and combat the scepticism that prevails, especially around recycling.

- The adoption of mechanisms on the part of municipalities such as **roundtables** or frequent **public meetings** can enhance citizen participation. Citizen engagement in

policy development and consultation should happen **early in the process**, not just after decisions are taken.

- Design policies with a **social dimension**. Policies that combine social benefits such as **job creation**, **neighbourhoods' development**, or reduced **municipal fees** with sustainability and environmental goals tend to be more acceptable to residents.

- Municipal or regional authorities should consider the characteristics of their area before taking any action. Replication of policies should first consider the **size**, **financial** and **human capacity** as well as specific **environmental challenges** of an area, always in conjunction with cooperation with CSOs and citizens.

- **Cooperation** between different municipalities, regions and with the central government is recommended to avoid **overlaps** and **inconsistencies** in policy implementation. Cooperation between different national actors, as well as **CSOs**, can bring positive results and access to **EU resources** for the sustainable development of a region.

- Finally, it is considered extremely important that the policies implemented have a **long-term sustainability plan**. Investing in policies that will have **visible results** on the ground but also **secure financial capacity** for an implementation beyond electoral cycles will have better results and will build a relationship of **trust** between the authorities and the citizens.

Co-funded by
the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

2022-1-IT02-KA220-ADU-000087270