


Gender Equality and Social Inclusion (GESI) Study Report

Inclusive Climate Action: Advancing Gender Equality and Social Inclusion Perspectives into Bosnia and Herzegovina Energy Transition

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a. List of Abbreviations

BiH	Bosnia and Herzegovina
CCAC	Climate and Clean Air Coalition
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
COPD	Chronic Obstructive Pulmonary Disease
CSO	Civil Society Organisation
ESAP 2030+	Environmental Strategy and Action Plan 2030+
EWS	Early Warning System
FGD(s)	Focus Group Discussion(s)
GESI	Gender Equality and Social Inclusion
GESEP	Gender Equality, Social Equity and Poverty (linked to ESAP 2030+)
KII(s)	Key Informant Interview(s)
NAP	National Adaptation Plan
NAPCC	Strategy of Adaptation to Climate Change and Low Emission Development
NDC	Nationally Determined Contribution
NECP	National Energy and Climate Plan
NGO	Non-Governmental Organisation
PCM	Project Cycle Management
PIN	People in Need
PM2.5	Fine Particulate Matter (air pollution)
PWD	Persons with Disabilities
SDG(s)	Sustainable Development Goal(s)
SEI	Stockholm Environment Institute
SECAP(s)	Sustainable Energy and Climate Action Plan(s)
SLCP(s)	Short-Lived Climate Pollutant(s)
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
UNSCR 1325	United Nations Security Council Resolution 1325 ("Women, Peace, and Security")
WHO	World Health Organisation

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Disclaimer

The findings and conclusions in this report are those of the authors and do not necessarily represent the views or official policies of People in Need or any other organisation.

1 Executive Summary

1.1 Context

Bosnia and Herzegovina (BiH) faces some of the highest air pollution levels in Europe, with ~3,300 premature deaths annually linked to fine particulate matter (PM2.5), costing over 20% of GDP. Energy poverty is widespread and gendered, forcing many Roma, rural, and female-headed and elderly households to rely on coal, wood, or waste for heating. Governance remains fragmented and highly technical, with weak integration of gender equality and social inclusion (GESI). BiH's climate responsibilities are split across state, entity, cantonal and municipal levels. Efforts to harmonise planning (through the National Energy and Climate Plan, entity energy plans and local SECAPs) are undermined by weak inter-ministerial coordination, siloed data, and limited capacity. This creates duplication, slows inclusive climate action, and hampers the integration of gender and social dimensions. As a result, women, youth, youth with disability, elderly people, Roma, and persons with disabilities carry the heaviest burdens of climate change, air pollution, and energy poverty, while being largely excluded from decision-making.

This Gender Equality and Social Inclusion (GESI) study was conducted in BiH through People in Need (PIN) internal funds to identify **how climate change, air pollution, and energy poverty affect different population groups, and examine the barriers, opportunities, and pathways for embedding gender equality and social inclusion into climate, energy, and environmental policies and practices.** The study provides recommendations to embed GESI into climate, energy, and environmental policies and initiatives. The findings will also guide PIN's current and future projects, ensuring interventions are inclusive and responsive to women, elderly people, Roma, youth, youth with disability, and other persons with disabilities. Grounded in both community voices and policy analysis, the study strengthens PIN's capacity to address structural barriers, reduce inequalities, and inform advocacy, making it a practical tool for shaping programmes, influencing policy, and contributing to systemic change in BiH.

1.2 Methodology

The analysis used a **mixed-methods approach**, combining primary data (key informant interviews and focus group discussions with women, Roma, youth, elderly people and persons with disabilities) with a desk review of national frameworks and international studies. This ensured that community perspectives were **anchored in and validated against** policy and research evidence.

1.3 Key Findings

1. **Air pollution as a systemic crisis.** Communities in Sarajevo, Tuzla, and Zenica report daily struggles with winter smog, school closures, and widespread health problems, particularly among children and elderly people. With tens of thousands of chronic respiratory diseases recorded in

2021[1], air pollution is both a health and economic crisis. Women carry additional unpaid care burdens during smog episodes, reinforcing gendered inequalities.

2. **Energy poverty is widespread and gendered.** Many low-income, Roma, and female-headed households remain reliant on polluting fuels. Although retrofit schemes and district heating upgrades exist, they often exclude those most in need due to high fees, complex procedures, and lack of outreach. Energy poverty forces trade-offs between heating, food, and healthcare, disproportionately affecting the most vulnerable segments of the population.
3. **Exclusion from decision-making and fragmented governance.** Policymaking on climate and energy is centralised, technical, and often inaccessible. Consultations are symbolic, failing to integrate community knowledge. While ESAP 2030+ introduced GESI language, key frameworks (NDC, NECP) still show limited to no integration of gender and social inclusion consideration, with weak enforcement and accountability. Local governments lack resources and capacity, resulting in fragmented and inconsistent implementation.
4. **Youth exclusion despite strong engagement.** Young people face disrupted education during pollution peaks and extreme events, such as floods, rising health risks, and exclusion from governance despite being among the most motivated to act. Youth with disabilities, Roma youth and those from low-income households face compounded barriers to participation and opportunities. Yet, youth are a vital untapped resource for innovation, digital engagement, and climate leadership.
5. **Structural inequalities and harmful norms.** Women's low land ownership (~30%), patriarchal inheritance practices, and discriminatory norms limit access to credit, property, and decision-making. Climate and energy issues are framed as "technical" rather than social, sidelining gender and health perspectives. Harmful coping practices, such as burning waste, persist as survival strategies in poor households, despite health risks.
6. **Intersectional vulnerabilities with weak data.** Large segments of the general population (particularly rural poor households, elderly people on fixed incomes) experience persistent poverty and energy poverty. Overlapping disadvantages (e.g., being Roma, elderly, female, from rural area, or living with a disability) deepen exclusion from energy, healthcare, and governance. These compounded risks remain largely invisible due to scarce disaggregated data on gender/sex, age, disability, or socio-economic status. Without intersectional monitoring, policies risk reinforcing inequality.
7. **Health and migration dynamics.** Pollution drives rising rates of respiratory and cardiovascular illness, with healthcare systems overstretched during peaks. Families with means are relocating from polluted cities, while poorer

[1] The Institute for Public Health of the Federation of BiH report shows that in 2021 there were 30,205 patients in the Federation with *chronic obstructive pulmonary diseases.* Institute for Public Health of the Federation of BiH, *Health-Statistical Yearbook 2021*, Table: Number of patients with chronic obstructive pulmonary diseases (J40–J46) https://zzjzfbih.ba/wp-content/uploads/2023/04/Zdravstveno-stanje-stanovni%C5%A1tva-engleski.pdf

households remain most exposed. Migration linked to environmental health impacts is an emerging social and demographic challenge.

1.4 Priority Recommendations

Based on these findings, the study proposes the following interlinked priorities:

- **Integrate GESI into governance and frameworks.** Mainstream gender and inclusion across climate and energy policies. Apply gender-responsive budgeting, mandatory GESI impact assessments, and disaggregated indicators. Strengthen inter-institutional coordination, appoint GESI focal points, and empower the Gender and Climate Coalition to influence decisions.
- **Reduce air pollution and energy poverty inclusively.** Expand targeted subsidies, clean-heating solutions, and energy-efficiency retrofits for vulnerable households, prioritising rural areas, Roma settlements, female-headed and elderly households. Simplify procedures and waive high connection fees. Implement measures on short-lived climate pollutants (e.g. stove replacement, methane capture) to deliver rapid health and equity benefits. Addressing energy poverty and ensuring inclusive access to health and social protection services are critical to enable vulnerable groups to participate in and benefit from a green, just transition.
- **Advance youth participation and leadership.** Establish youth climate councils at municipal and higher levels, fund youth-led initiatives through micro-grants and mentorship and integrate climate and civic education in schools. Regional and international exchanges should be supported to strengthen cross-learning, youth innovation and activism.
- **Address intersectionality through data and structural reforms.** Collect and publish disaggregated data (sex/gender, age, disability, geography) across health, climate, and energy sectors. Expand women's access to credit and tailor programmes to groups facing multiple disadvantages such as, single mothers in rural areas, youth with disabilities, and elderly Roma women.
- **Strengthen health protection and public awareness.** Build healthcare capacity for pollution peaks, ensure equitable access for marginalised groups, and mandate disaggregated health reporting. Launch inclusive public-awareness campaigns on pollution risks and clean energy, using storytelling from women, youth, Roma, persons living with disability and elderly people. Ensure risk communication is clear, actionable, and accessible to all, including persons with disabilities.
- **Strengthen monitoring and reporting systems.** Establish harmonised, country-wide mechanisms for data collection and reporting on climate and GESI indicators. Ensure criteria are consistent across both entities and all cantons, and require disaggregated data (by sex/gender, age, disability) to track progress and guide evidence-based policymaking. Further analysis is needed to determine how the current lack of harmonised mechanisms limits effective monitoring and policymaking.
- **Advance awareness and education.** Invest in sustained public awareness campaigns and integrate climate and GESI education into schools and

community programmes. Focus on practical knowledge about air pollution, clean energy, and equity, while highlighting the roles of women, youth, and marginalised groups as active agents of change.

1.5 Conclusion

This GESI study demonstrates that **climate change and air pollution in BiH are not only environmental issues but also social justice challenges**. Vulnerabilities are shaped by gender, poverty, age, disability, and governance bottlenecks. By bridging the gap between **policy commitments** and **community realities**, BiH can advance a just and inclusive green transition; one that protects health, expands economic opportunities, and ensures that those most affected by climate impacts, air pollution and energy poverty are at the centre of decision-making and not left behind.

2 Introduction

2.1 Rationale

BiH faces some of the most severe air pollution in Europe, with an estimated 3,300 premature deaths annually linked to fine particulate matter (PM2.5) and associated costs amounting to over 20% of GDP (World Bank, 2020; UNICEF, 2020). Short-lived climate pollutants (SLCPs), such as black carbon and methane, are major contributors to both health impacts and accelerated climate change. Climate and energy governance in BiH remains fragmented, highly technical, and centralised, often excluding the voices of those most affected.

Women, Roma communities, elderly persons, children, youth, youth with disability, and other persons with disabilities face disproportionate exposure to pollution and barriers to participating in climate action. Unequal land ownership (men hold ~70% of land), limited access to credit, and inadequate healthcare further compound vulnerabilities. Despite legal commitments under CEDAW, the Istanbul Convention, and the Law on Gender Equality in BiH[2], as well as policy frameworks such as the Nationally Determined Contribution (NDC), National Energy and Climate Plan (NECP), Environmental and Social Action Plan 2030+ (ESAP 2030+), the integration of gender equality and social inclusion (GESI) into climate and energy policy remains weak.

This study responds to these challenges by generating evidence on how climate change, air pollution, and energy transition policies affect different groups, and by identifying entry points for more inclusive action.

[2] "Law on Gender Equality in Bosnia and Herzegovina." *Agencija za ravnopravnost spolova BiH*, revised 2010, https://arsbih.gov.ba/english/law-on-gender-equality-in-b-h/

2.2 Objectives

The Gender Equality and Social Inclusion (GESI) study was undertaken through PIN internal funds to **examine how climate change and air pollution affect different groups in BiH, and to generate practical recommendations for ensuring that gender equality and social inclusion are systematically integrated into national climate, energy, and environmental policies, programmes, strategies, and initiatives.** The study will also directly inform PIN's current and future climate and energy-related projects by supporting the design and implementation of interventions that are more inclusive, equitable, and responsive to the needs of different population groups, including women, Roma, youth, youth with disability, elderly people, and persons with disabilities. By grounding its programming in evidence from both community voices and policy analysis, PIN will be better positioned to address structural barriers, reduce inequalities, and strengthen resilience. The findings will further support PIN in advocacy and partnership-building, ensuring that the organisation contributes to broader systemic change in climate and environmental governance in BiH. In this way, the study serves not only as a research product but also as a practical tool for shaping programming, influencing policy, and enhancing PIN's strategic positioning in the climate and energy sector. Its objectives are to:

1. Examine how **climate change mitigation and air pollution impact different population groups**, particularly women, marginalised and underrepresented communities, and vulnerable populations.
2. Assess how **clean energy initiatives and air quality improvements affect and benefit diverse groups**, identifying gaps in access, energy poverty, and health outcomes.
3. Enhance the **relevance, sustainability, and inclusiveness of PIN's current and future projects** by ensuring active participation and representation of different population groups, and by strengthening PIN's commitment to designing and implementing equitable climate and energy interventions that address structural barriers and inform advocacy for systemic change in BiH.
4. Generate **evidence and insights** that can be presented at high-level events and conferences, strengthening advocacy for inclusive climate and energy policies in BiH.

2.3 Scope and Approach

The study draws on a mixed-methods approach, combining primary and secondary data.

- **Primary data collection** included Key Informant Interviews (KIIs) with policymakers, experts, UN representatives, researchers, academia and CSOs; Focus Group Discussions (FGDs) with women, Roma, elderly persons, youth, and persons with disabilities in both urban and rural settings; and

community consultations with grassroots groups. Internal consultations with programme staff further enriched the evidence base. Data were collected across specific areas, including Sarajevo Canton, Tuzla Canton, Zenica-Doboj Canton, Herzegovina-Neretva Canton, the Banja Luka region, and the East Sarajevo region, as well as in selected communities such as Gračanica (village), Rudar local community/Ciljuge (settlement), Jablanica (city), Sarajevo (city), Zenica (city), East Sarajevo (City), and others.

- **Secondary data collection** involved a desk review of national policy frameworks (NDC, NECP, Framework Energy Strategy 2035, Adaptation Strategy, NAP, and ESAP 2030+), sectoral strategies in energy, health, and social protection, and key international sources (World Bank, UNICEF, UNDP, CCAC).

The desk review was not a standalone exercise but a means to contextualise and validate primary data. It confirmed systemic gaps such as the absence of sex/gender-, age-, disability-disaggregated data, while also situating local experiences within broader research and policy debates. Primary data filled these gaps by capturing the voices of communities often excluded from official statistics. Together, this integrated approach provides a robust evidence base for developing recommendations that are both grounded in local realities and aligned with national and international priorities.

3 Methodology

The GESI study in BiH applied a **qualitative, participatory approach** combining both primary and secondary data sources. The methodology was designed to ensure that local voices, especially those of women, Roma, youth, elderly persons, and persons with disabilities, were central, while also drawing on existing literature and policy frameworks to situate findings within the broader national and regional context. The study was conducted between **February and June 2025**. It followed the **PIN GESI Analysis Approach** and was guided by the **PIN Gender Analysis Guide**, which allowed for the systematic identification of barriers, needs, and opportunities across multiple domains.

The study covered both urban and rural areas across BiH, with consultations conducted in the Federation of BiH and Republika Srpska (Sarajevo Canton, Zenica-Doboj Canton, Tuzla Canton, Herzegovina-Neretva Canton, Banja Luka region, East Sarajevo region) to ensure diverse perspectives and capture regional variations.

3.1 Primary Data Collection

- **Key Informant Interviews (KIIs):** Conducted with policymakers, institutional representatives, CSO leaders, UN representatives, academia and technical experts in climate, energy, health, gender, and social sectors. These interviews explored perceptions of gender and social inclusion in climate, air quality and energy transition policies, gaps in implementation, and barriers to participation.
- **Focus Group Discussions (FGDs):** Carried out with diverse community members in both urban and rural settings (Živinice, Zenica, Sarajevo, Jablanica, Istočno Sarajevo), including youth, Roma settlements, rural women, and pollution-affected areas. FGDs provided insight into daily experiences with air pollution, climate change, energy poverty, and coping strategies, as well as community perspectives on governance and inclusion.
- The report's findings were reviewed in a validation discussion with a selected group of experts (academics, researchers and UN representatives) whose feedback helped confirm the main conclusions and refine the recommendations into more practical, context-specific actions

3.2 Secondary Data Collection (Desk Review)

The desk review complemented the primary research by providing a structured assessment of national frameworks and available data. It examined key strategic documents, including the Nationally Determined Contribution (NDC), the draft National Energy and Climate Plan (NECP), the Strategy of Adaptation to Climate Change and Low Emission Development, the National Adaptation Plan (NAP), and the Environmental Strategy and Action Plan (ESAP 2030+). Sectoral strategies in energy, health, and social protection were also reviewed.

Where relevant, the desk review incorporated findings from international and regional studies, such as the UNDP Blueprint for a Gender-Responsive Just Transition, the GESEP/ESAP 2030+ analysis, World Bank and UNICEF reports on air pollution and health, and Climate and Clean Air Coalition (CCAC) work on short-lived climate pollutants (SLCPs). This evidence was not used as the sole basis of the analysis but to contextualise and triangulate what emerged from KIIs and FGDs, especially on issues such as energy poverty, health impacts of air pollution, and participation gaps in governance.

3.3 Data Analysis

All qualitative data collected through KIIs, FGDs, and consultations was systematically coded and analysed. This approach allowed the research team to identify key themes, patterns, and intersections across domains, and to cross-check emerging insights with desk review evidence.

3.4 Ethical Considerations

As this is a GESI study, particular care was taken to protect participants' rights, safety, and dignity. Informed consent was obtained from all participants prior to interviews and FGDs, with clear explanations provided on the purpose of the research, voluntary participation, and the right to withdraw at any time. To ensure accessibility, questionnaires, information materials and consent forms were adapted into simple, clear language, and when needed, delivered in oral form, translated, or presented in formats suitable for persons with disabilities. All data was anonymised during transcription and analysis to safeguard confidentiality. Special consideration was given to the safety of women, youth, and marginalised participants by adapting consultation settings, for example, choosing safe, accessible venues and ensuring privacy, to create a respectful and inclusive environment for all participants.

3.5 Limitations

Several limitations and constraints were faced during the analysis:

- **Data gaps:** Access to disaggregated national and local data (by sex/gender, age, disability) remains limited, particularly on health outcomes and energy poverty. For example, health data on air pollution-related diseases is not broken down by sex/gender, age, or disability, making it impossible to assess which groups are most at risk. Energy poverty statistics are also reported in aggregate, hiding the specific burdens faced by female-headed households or by Roma communities.
- **Respondent availability:** In some areas, it was difficult to engage certain groups due to time constraints, lack of interest in discussing the topic, lack of awareness on the topic, or accessibility barriers.
- **Geographic access:** Field access to certain pollution hotspots and rural settlements was restricted by logistical challenges.
- **Scope constraints:** While the study identified systemic issues and vulnerabilities, the absence of comprehensive, disaggregated quantitative data restricted the ability to provide population-wide estimates.

Despite these constraints, triangulating KIIs, FGDs, and consultations with desk review evidence provided a strong and credible evidence base for the findings and recommendations presented in this report.

4 Bosnia and Herzegovina: Social, Economic and Environmental Context

4.1 Policy and Institutional Framework

At **the policy level**, BiH has made international commitments such as the Paris Agreement, the Sofia Declaration on the Green Agenda for the Western Balkans, and the Sendai Framework for Disaster Risk Reduction. However, GESI integration across these commitments remains limited. National strategies like the NDC and draft NECP remain largely gender-blind, while the Environmental Strategy and Action Plan (ESAP 2030+) represent progress by integrating gender equality and social equity, though implementation is uneven. The Gender Action Plan BiH (GAP) 2023–2027, led by the Gender Equality Agency, provides a national framework for promoting gender equality, with priorities including women's participation in decision-making, economic empowerment of rural and Roma women, and mainstreaming gender in environment, energy, and health policies.

A deeper reflection on mitigation policies is also needed. Fuel taxes, vehicle emission standards, and potential carbon pricing may contribute to emission reductions, but they risk regressive impacts on low-income households reliant on older vehicles or polluting fuels. Conversely, renewable energy and energy-efficiency investments have the potential to reduce energy poverty and improve health outcomes, but only if designed with inclusive access mechanisms, such as subsidies for low-income households, simplified application procedures, and active participation of local communities. A distributional lens is therefore critical to ensure that mitigation policies do not exacerbate existing inequalities.

4.2 Governance and Implementation Challenges

BiH is **institutionally complex**, with **state**, **entity**, **cantonal**, and **municipal** authorities all having some climate- and energy-related responsibilities. In principle, policy coherence should be achieved through alignment between:

- National Energy and Climate Plan (NECP) at state level,
- various entity-level energy strategies (in both the Federation of BiH and Republika Srpska), and
- local Sustainable Energy and Climate Action Plans (SECAPs)

In practice, however, these planning instruments are fragmented and rarely harmonised across governance levels. The challenges within this multi-layer governance system are not only administrative but also **epistemic**: different actors may operate with **divergent data sets, goals, and timelines**. This creates duplication of efforts due to lack of systematic coordination. Ministries and agencies tend to guard their own mandates, leading to a **narrow and isolated approach** to policy-making. For instance, **climate change strategies are often developed without input from the health or social protection sectors**, even though these areas are critically affected by environmental issues. This

contributes to the **exclusion of gender and social dimensions** in climate and environmental planning. The avoidance of cross-sectoral collaboration is largely **institutional self-preservation** in the face of bureaucratic complexity. This isolationism results in **missed opportunities for holistic policy-making** and undermines the design and implementation of inclusive climate action.

Simultaneously, **technical ministries (such as ministries of environment, energy, industry, agriculture, forestry, and other related sectors) lack the tools and motivation** to incorporate GESI components in their planning. Interdisciplinary collaboration is not the norm, and **data remains compartmentalised**, stuck in different institutions that rarely communicate. This absence of **inter-institutional coordination** is exacerbated by **low trust and fear of exposure**, many officials are reluctant to share data or collaborate because they feel insecure in their roles or fear their lack of expertise will be revealed.

Ethnopolitical veto power remain a significant barrier to effective governance in BiH, including in areas such as climate policy. Decision-making is frequently fragmented along ethnic lines, which often leads to institutional deadlock. These blockades are not always about the substance of a policy itself but are sometimes the result of political bargaining or identity-based positioning. Such practices contribute to public frustration and reinforce distrust in institutions. While inclusive consultations with different groups are an essential feature of a multi-ethnic society, they can at times be misused for political ends, raising questions about the true neutrality of governance mechanisms.

While BiH is expected to meet similar climate goals as EU countries, yet lacks access to EU structural or climate funds, restricted domestic budgetary capacities and coordinated financial mechanisms. This creates a **narrative of asymmetrical obligation**: BiH is held accountable to global standards **without equal support**, resulting in fragmented project-based funding (e.g., soft loans, donor projects) and reactive rather than strategic implementation. This contributes to a **semi-colonial development narrative**, where BiH must “catch up” to Europe but is structurally disadvantaged from doing so.

Systematic support is coming from EU to BiH but mostly in the form of technical assistance and some financial support. But skilled, long-term human capacity is lacking, especially there is a lack of trained energy/environmental professionals, public administrators at local levels combined with missing institutional memory and coordination mechanisms. Public institutions in BiH exhibit resistance to change, both structurally and culturally. New approaches (especially those that are interdisciplinary or inclusive) are viewed with suspicion. Environmental issues are not treated as societal priorities, and innovations are met with inertia. At the individual level, fear and insecurity limit openness to change. Civil servants are reluctant to adopt new practices, and many lack the training or confidence to do so. The public sector is described as risk-averse, which significantly hinders reform. Without deep investment in human capital, BiH may remain dependent on external consultants and donors, which perpetuates capacity outsourcing.

While there are significant developments (such as the implementation of Article 24 of the *Law on Gender Equality in Bosnia and Herzegovina* (Official Gazette of BiH Nos. 16/03, 102/09 and 32/10), which mandates gender mainstreaming for all civil servants) together with the integration of gender in national strategies (e.g., UNSCR 1325) and the creation of formal coordination mechanisms, systemic barriers, resource limitations, poor local-level capacity and traditional gender roles persist as major obstacles.

Opportunities lie in enhancing NGO engagement, improving data systems, operationalising gender-responsive budgeting, and strengthening horizontal and vertical policy coordination.

The effects of climate change in BiH are widespread and growing. However, narratives from citizens, health professionals, CSO representatives and activists reveal a key discrepancy: **while disasters may be universal in occurrence, they are not universal in impact**. As one of the participants suggested "We react well to consequences, rather than preventatively". This repeated theme suggests a **deeply embedded pattern of reactive governance**, where action is mobilised only in the aftermath of catastrophic events, rather than through pre-emptive planning. While solidarity and community spirit emerge strongly during crises (e.g., floods in Jablanica in 2024), they are not matched by sustained institutional readiness or long-term planning. There is a **disconnect between initial emergency response and long-term recovery**, with survivors still lacking adequate housing years after the extreme event, such as a flood. This undermines public trust and reflects systemic neglect of post-crisis social reconstruction.

There is widespread acknowledgment of policy fatigue and fragmented institutional coordination. As stated by one of the participants:

> *"Numerous strategies have been drafted, but concrete implementation has yet to begin."*

In certain cases, the implementation of strategies, action plans and policies are either weak or symbolic. Gender mainstreaming is often tokenistic: "People really think especially about gender equality and inclusions as a box to tick." In regards to environmental strategies they are frequently developed with international support but lack domestic ownership or capacity for follow-through. In the parallel reality projects that begin under one political leadership can be abandoned after elections, as with the halted solar plant project. The new authorities no longer saw energy transition or solar as an area of interest.

Some of the contributing factors are: GESI and climate policies exist but lack enforcement, local governments are undertrained and under-resourced, there is lack of communication and coordination between state and local institutions,

reporting mechanisms are inconsistent and often disconnected from field realities. Despite the existence of legal frameworks (e.g., Gender Equality Law), the impact is diluted due to weak collaboration, low awareness, and a lack of political will, especially at local levels where actual implementation must occur. The institutional complexity and lack of coordination across ministries, entities, and sectors results in fragmentation which prevents a holistic approach to climate, gender, and social inclusion.

BiH's administrative structure creates silos that inhibit cross-sectoral cooperation. Institutions avoid collaboration to minimise bureaucratic entanglements. Inter-institutional collaboration, especially involving health, gender, or social affairs in environmental policymaking, is rare.

The fragmentation extends up until the data collection and management, with ministries and institutes hoarding data, or not sharing it with other institutions. Lack of accessible, integrated, and shared data is a systemic issue that limits informed decision-making. The government agencies, national and entity-level statistical agencies, and research institutes collect data but often fail to publish or share it. This results in lack of evidence-based criteria for decision-making leading to resource misallocation.

Democratising data access is crucial for transparency, accountability, and effective planning. Current reluctance stems from lack of expertise and a culture of defensiveness in institutions.

The climate, energy, health, and gender issues are deeply interconnected, yet treated as siloed topics in both policy and practice. Working groups and strategies are often developed by a small circle of technical ministries, excluding health, social welfare, or gender experts. There is a need for capacity-building and mindset change. Addressing complex environmental and social challenges demands systems thinking, which remains underdeveloped in most BiH institutions. Despite formal structures for participation in strategy development, implementation often lacks meaningful follow-through. Experts, civil society, and international partners are involved during the **drafting phase**, but **their recommendations are frequently ignored** when strategies move to the execution stage. This signals a critical **disconnect between design and delivery**, rooted in institutional rigidity and a **lack of enforcement or accountability mechanisms**. Participation becomes **symbolic rather than substantive**, particularly in relation to GESI commitments.

The narratives clearly show that GESI concerns are not peripheral - they are central to climate resilience in BiH. Yet, they are often deprioritised when competing demands (like economic stabilisation or housing reconstruction) dominate state agendas, or they remain abstract in policies not linked to real life.

4.3 Data, Reporting and Evaluation

The importance of data collection and reporting is acknowledged and increasingly embedded in institutional practices across BiH, though unevenly. Some key advances include:

- **Annual reporting obligations** are linked to national strategies, particularly gender equality plans. Institutions are **formally required to submit gender-relevant data** to bodies like the Council of Ministers.
- There is **cooperation with international organisations**, such as **UN Women, UNDP, and other UN agencies**, to obtain supplementary data for national reports. These partnerships help fill gaps where domestic data systems fall short, especially in newly emerging policy areas like climate and energy.
- **UNSCR 1325 ("Women, Peace and Security") reporting** is highlighted as a **strong example of gender-responsive data work**. It includes structured civil society participation and has a relatively developed reporting and implementation framework.

Despite structural progress, practical and systemic data limitations persist and hinder effective policy evaluation and planning. There is poor data availability at central institutional levels (state and entity ministries, national agencies) and local/field levels (cantonal and municipal offices). Many institutions are unable or unwilling to provide adequate data for annual reporting. This results in incomplete assessments and weak evidence basis for policy interventions. Data across key sectors is not gender disaggregated. There is limited access to gender-specific statistics, particularly in climate, energy, health, and environmental policies. Even where such data is theoretically collected, it's often not processed or reported in a disaggregated way. This gap makes it difficult to assess how environmental or economic developments (like energy price increases) impact different genders and vulnerable groups.

Resistance and weak capacity at the local level add up on the weak data availability making the situation more complex. Local institutions lack both awareness and skills for effective reporting. There's a perception that gender and climate integration is too complex, which leads to reluctance or neglect in meeting reporting obligations. The basis of this lies in the inconsistent understanding of the value of gender data. While formal processes demand reporting, there is a fundamental gap in understanding why collecting gender-specific data is essential. Some actors still see gender as an "add-on" rather than integral to policy outcomes.

One of the clearest examples of this fragmentation can be seen in the healthcare sector, particularly in relation to respiratory illnesses. According to a medical expert with long-standing experience in public health, there is no national registry for diseases such as chronic bronchitis, chronic obstructive pulmonary disease (COPD), or asthma, conditions that are increasingly linked to environmental and behavioural risk factors, including air pollution and tobacco use. Although some

data might exist within the Institute for Public Health of the Federation of BiH and the Public Health Institute of Republika Srpska, there is no centralized system through which such data can be aggregated or analysed on a broader scale.

The absence of gender-disaggregated or age-specific data further complicates efforts to identify the most vulnerable populations, despite the well-known fact that children, the elderly, pregnant women, and people with chronic illnesses bear the brunt of environmental health risks. Still, the healthcare system continues to treat consequences rather than focusing on root causes or prevention, due largely to the absence of structured data and strategic oversight.

On the institutional side, gender statistics remain underdeveloped. The Agency for Statistics of BiH does publish a biennial report titled “Women and Men in Bosnia and Herzegovina”, which provides a snapshot of gender distribution in areas such as employment. However, these reports remain basic in scope. Gender-disaggregated data in critical sectors (such as renewable energy, fossil fuel use, agriculture, or climate adaptation) is either absent or only sporadically collected as a side note in larger studies.

Moreover, internal systems within institutions often lack the capacity to adapt, even when new data points are requested. Something as seemingly simple as adding a new variable (like gender or social vulnerability status) to an existing database can become a bureaucratic hurdle due to outdated IT systems and a lack of institutional incentives for reform.

In terms of energy and climate data, the situation is even more concerning. A household energy consumption survey was last conducted in 2015, nearly a decade ago. While it did collect information on household fuel types and structures, it did not go beyond surface-level data. It did not ask critical follow-up questions such as whether residents experienced respiratory illnesses, how much they spent on medical care, or why they chose certain fuel sources over others. These gaps render the data insufficient for analysing the social and health impacts of energy use, particularly among lower-income or marginalised groups.

As observed the monitoring and evaluation mechanisms in BiH, particularly in the fields of climate change, energy, and air quality, are widely acknowledged to be weak, fragmented, and underdeveloped. while the country is formally obligated to report under frameworks such as the *Nationally Determined Contributions (NDC)* and the *Energy Community Treaty*, in practice, monitoring is largely superficial or non-existent. In preparing the latest NDCs, for example, it became apparent that greenhouse gas emissions had **increased rather than decreased**, and no institution could provide clear, verifiable data on the implementation or impacts of climate mitigation measures. The only reliably tracked indicator was the capacity of renewable energy installations. This reflects not just technical but institutional shortcomings: data is **disaggregated across agencies**, there is **no central coordination**, and there is **ambiguity about who is responsible** for data collection, analysis, and reporting.

While some donor-supported initiatives (e.g., UNDP projects) are attempting to build capacity and support the creation of MRV (Monitoring, Reporting, and Verification) systems across various sectors like energy, emissions or environment, progress is slow and often donor-driven. There is growing awareness within ministries of the need to integrate these systems into a centralized database or platform. However, practical implementation is still in early stages. Institutional ownership remains weak, with little willingness to take on the additional workload required to maintain robust data systems.

4.4 Intersectional Social and Economic Vulnerabilities

The sociocultural, political, and economic context in BiH significantly shapes gender norms and the inclusion or exclusion of different groups in climate and environmental governance. Deeply entrenched patriarchal norms and fragmented institutions intersect with environmental challenges to create multilayered vulnerabilities. These are further compounded by intersectionality: gender overlaps with factors such as age, disability, geography, and socio-economic class, leading to distinct experiences of exclusion and risk. National data show that around 16 % of the population of BiH lives below the national poverty line, with rural populations, unemployed youth, elderly persons and persons with disabilities facing particularly severe deprivation. This broad structural poverty cuts across population groups and deepens the intersectional risks described above[3]. For example, elderly Roma women in informal settlements face combined disadvantages related to age, poverty, housing, and discrimination, while youth with disabilities encounter barriers to both education and participation in climate action. Recognising these overlapping identities is critical for designing inclusive and effective policies.

4.5 Community Experiences of Air Pollution and Energy Poverty

Community voices captured through FGDs and KIIs emphasised **air pollution** as one of the most urgent daily struggles. Participants in Sarajevo, Tuzla, and Zenica described frequent winter smog episodes, school closures, and worsening health among children, elderly people, and those with chronic illnesses. Women reported heightened care burdens during these episodes, as they were responsible for both children kept home from school and sick relatives. **Energy poverty** emerged as a key challenge. Many households, particularly in low-income or marginalised communities, rely on older, inefficient heating systems and polluting fuels such as coal, wood, or mixed biomass. The high cost of electricity and heating fuels forces families to make difficult trade-offs between warmth, food, and other basic needs. These energy constraints not only exacerbate indoor and outdoor air pollution exposure but also contribute to chronic stress and health risks, especially for children, the elderly, and people with pre-existing illnesses. Participants highlighted that insufficient access to affordable and clean energy often limits their ability to protect their homes and families during cold months, creating a

[3] World Bank, Bosnia and Herzegovina Poverty Assessment: 2023 Update, Washington DC: World Bank, 2023.

cycle of vulnerability where environmental, social, and economic factors are closely intertwined.

4.6 Clean-Energy Programmes and Their Limits

Specific clean energy and air quality programmes have been introduced in BiH, but their inclusiveness remains uneven. Energy-efficiency retrofits have been piloted in social housing and public buildings, yet KIIs and FGDs indicated that female-headed families and Roma households often cannot access them due to complex application procedures or lack of information. Renewable energy investments, including solar and small hydropower, are growing, though there is little evidence that this benefit marginalised groups. These examples illustrate how clean energy initiatives, without deliberate safeguards, risk reproducing rather than reducing inequalities.

4.7 Agriculture Under Climate Stress

Agriculture, a critical livelihood sector in BiH, is increasingly at risk. Focus group discussions (FGDs) with women working in the sector highlighted that climate change has already triggered shifts in seasonal patterns, making weather more unpredictable, while agricultural pests, previously unseen in certain regions, are emerging as new threats to crops. According to agriculture sector assessments, BiH's agriculture (which employs nearly 20% of the workforce and contributes around 6–7% of GDP) is highly climate-sensitive and vulnerable to extreme weather, droughts, heatwaves, and flooding.

4.8 Evidence from National and International Studies

The desk review confirmed these lived experiences with national and international evidence. CCAC reporting on short-lived climate pollutants identifies black carbon and methane from household heating, coal plants, and transport as both health hazards and accelerants of climate change. Energy poverty further compounds these challenges: many low-income, Roma, and rural households rely on coal, wood, or waste for heating, exposing them to higher levels of indoor and outdoor pollution.

Overall, the contextual analysis highlights a **dual reality**: communities are facing daily and intensifying impacts of pollution and energy poverty, while national frameworks are progressing in formal commitments but failing to embed gender and social inclusion systematically into design and implementation. This **gap between policy and lived experience** reinforces the need for targeted, inclusive approaches that empower marginalised groups, address structural inequalities, and strengthen enforcement and accountability in BiH's climate and environmental governance.

4.9 Context at a Glance

- **Air Pollution Crisis and Energy Poverty**
  - BiH has some of the highest air pollution levels in Europe[4].
  - ~3,300 premature deaths annually linked to PM2.5 exposure.
  - Estimated economic costs: **21.5% of GDP** (World Bank, UNICEF).
  - High reliance on coal, wood, and waste for heating, especially among Roma, rural households, and low-income groups.
  - Energy poverty disproportionately affects **female-headed households, elderly persons, persons with disabilities, and low-income families**.
- **Intersectional Vulnerabilities**
  - Approximately 16% of the general population lives below the poverty line, including many rural families, Roma, and elderly persons. These groups face similar barriers to energy access and climate-resilient livelihoods.
  - Elderly Roma women face overlapping risks from poverty, housing, health vulnerabilities, and discrimination.
  - Youth with disabilities experience barriers in both education and participation in climate action.
  - Single mothers, especially in rural areas, struggle with high energy costs and care burdens.
- **Agriculture and Climate Impacts**
  - Agriculture remains an important source of livelihood, particularly in rural communities.
  - Rising temperatures, soil degradation, and water stress threaten productivity and food security.
  - Women farmers, often with limited land ownership and credit access, face heightened barriers to adaptation.
  - Climate-resilient agriculture and sustainable practices are not yet systematically integrated into energy or climate policies.
- **Clean Energy Initiatives**
  - Retrofit programmes and district heating upgrades exist but **rarely reach Roma households, female-headed families, or the poorest communities**[5].
  - Renewable energy investments are growing but lack mechanisms to benefit vulnerable groups[6].
- **Policy Commitments**
  - National frameworks (NDC, NECP, ESAP 2030+) and international agreements (Paris Agreement, Sofia Declaration, Sendai Framework) mark progress in setting ambitious climate, energy, air-quality and environmental targets; establishing monitoring indicators; and aligning national environmental and energy policy with EU standards.
  - **Most remain gender-blind**, with weak integration of social inclusion.
  - GAP BiH 2023–2027 calls for stronger institutional coordination and mainstreaming gender across sectors, including environment, energy, and health.
- **Governance Challenges**
  - **Highly fragmented governance** with over 160 institutions at state, entity, cantonal, and municipal levels.
  - Results in unclear mandates, weak accountability, and limited community participation.

5 GESI Analysis Framework

5.1 Access to Energy, Health and Social Protection Services

5.1.1 Comprehensive Overview of Findings

Primary data from FGDs and KIIs consistently highlighted **unequal access to resources and services and opportunities** as one of the most pressing dimensions of exclusion. Women, elderly persons, and Roma families described daily struggles with energy poverty, often relying on coal, wood, or waste for heating. Communities in Tuzla and Zenica reported that poor housing quality and lack of thermal insulation further increased energy costs and exposure to indoor air pollution.

The desk review corroborated these findings with national data. Structural inequality limits women's ability to secure credit, invest in renewable energy, or benefit from climate adaptation subsidies. Similarly, World Bank data shows that as of 2016, only 63% of the population in BiH had access to clean cooking technologies, with reliance on solid fuels particularly high among Roma households and low-income rural communities. This reinforces the testimonies from FGDs where Roma participants described frequent respiratory illness linked to indoor smoke exposure. Intersectionality emerged as an issue that would need to be more prominently considered and addressed. For instance, elderly Roma women in rural areas face layers of vulnerability, such as age-related health risks, poor housing conditions, energy poverty, which intensify their exposure to pollution and health-related risks.

Energy poverty emerged as a recurring theme across both data sources. FGDs in Sarajevo, and rural areas revealed that low-income and female-headed households are disproportionately affected, often forced to choose between heating, food, and healthcare expenses. The desk review confirmed that energy poverty is structurally embedded, with limited subsidies reaching vulnerable groups and existing programmes being complex and inaccessible. International analyses, such as the UNDP Blueprint for a Gender-Responsive Just Transition, warn that without safeguards, transition measures (such as carbon pricing or fuel taxes) could further disadvantage these households unless paired with targeted support.

Access to public services was also seen as unequal. Interviewed stakeholders noted barriers to healthcare during pollution peaks, with older people and persons with disability often unable to access facilities or afford medication. Desk review findings aligned with these concerns, highlighting that public health data in

[4] World Health Organisation (WHO), *WHO Global Air Quality Database 2022*, available at: https://www.who.int/data/gho/data/themes/air-pollution/who-air-quality-database

[5] World Bank. *Bosnia and Herzegovina Poverty Assessment: 2023 Update.* Washington, DC: World Bank, 2023. Available at: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099311323060532841

[6] Renewable energy investments are growing, with hydropower already contributing ~29% of electricity production in 2022, and projections under the NECP scenario suggesting that renewables could reach ~59% of the power generation mix by 2030. However, many new projects still lack mechanisms to ensure benefits accrue to vulnerable groups.

BiH is not systematically disaggregated by sex/gender, age, or socio-economic status, making it difficult to design responsive health interventions.

In sum, both primary and secondary evidence demonstrate that unequal access to clean energy, credit, and public services significantly undermines resilience to climate change and air pollution in BiH. Addressing energy poverty and expanding inclusive access to health and social protection services are critical for ensuring that vulnerable groups can participate in and benefit from a green, just transition.

> *Energy poverty is widespread, especially among low-income households, Roma households, elderly people, and female-headed families. Many heat only one room due to costs.*
>
> *"Most of the people in Bosnia and Herzegovina, they heat only one room because it's expensive."*
>
> *"Women farmers face barriers to land ownership and access to subsidies, though pilot programmes exist."*
>
> *"Ownership of land is still very low due to stereotypes and traditional values, even though the number of women farmers is increasing."*

5.1.2 Detailed Insights from Community and Stakeholder Consultations

5.1.2.1 Transition Fatigue and Structural Stagnation

Despite over three decades of post-conflict reforms BiH is in "transition fatigue". The country remains trapped in a transitional framework - economically, politically, and socially. While economic measures have been attempted, they have largely failed to address systemic issues or produce inclusive growth. However, the **energy transition** is positioned as a potential lever for broader societal change, especially through the concept of **just transition**.
The closure of mines without alternative livelihoods is already causing fear of economic collapse. People think that it might cause an even bigger crisis in the economy than after the war in the 90s. The situation is worsened by rising energy prices disproportionately affecting the marginalised groups (women, low-income households) and the increased health costs from air pollution when energy poverty drives households to use polluting fuels. The participants of the study highlighted that if the electricity prices will continue to rise it will reach the EU level which will cause almost everyone in BiH to be energy poor.

When exploring energy efficiency means applied at the local level troubling **patterns of inequity, opacity, and inefficiency** were revealed. Investments into

insulation or facade improvements (e.g., styrofoam and plastic windows) were made in several high-rise residential buildings, but with no changes to heating systems. As a result, residents continued to experience poor indoor air quality and high heating costs. Even worse, no transparent criteria existed for choosing which buildings received upgrades. Decisions appeared to be made arbitrarily or politically, with anecdotal evidence suggesting that personal connections influenced resource allocation. The result: ineffective spending, no measurable energy savings, and continued hardship for vulnerable people. There is also no follow-up mechanism to ensure that once investments are made (whether in eco-friendly heating infrastructure or energy-efficient buildings) they are maintained or used correctly. There are no inspections, no public education, and no user support, leading to inefficient usage and rapid degradation of expensive systems.

Efforts to create a national social registry or “social card” system have repeatedly failed. As a result, there is no way to accurately identify or prioritise vulnerable groups for climate adaptation or energy efficiency programs. This failure directly contributes to budget misuse and policy misalignment, as no one can confidently identify who most needs support, whether in terms of housing retrofits, health services, or energy subsidies.

A just transition must center on economic justice, job retraining, and equitable access to energy. Otherwise, decarbonisation efforts risk worsening inequality and instability. This framing implies that energy transition is not just about decarbonisation, but also about social inclusion, especially for marginalised populations. By integrating these groups into new green sectors, there's an opportunity to correct long-standing inequities that previous economic reforms have failed to redress.

5.1.2.2 Civil Society, a Critical Actor in the Game

Civil society organisations in BiH play a pivotal role in advancing inclusive climate action, often filling the gaps left by institutional inertia, fragmentation, and capacity shortfalls. Despite their critical function, CSOs remain **isolated** in both practice and perception, frequently seen as outsiders, agitators, or adversaries rather than as **collaborative partners** in governance.

The findings of the study underscore that civil society has been a driving force in the integration of climate change, air quality, gender equality, and social inclusion. Notably, CSOs have led early efforts to put climate and environmental issues on the national agenda. They often serve as intermediaries between vulnerable communities and decision-makers, bringing local concerns to policy tables. In the realm of social inclusion, interviewees observed that CSOs are frequently the only actors consistently active in advocating for vulnerable and underrepresented populations. According to the CSOs without social activities there is no social inclusion, and here is where they feel confident to take the agenda forward. This central role of CSO is especially important given the limited capacities and awareness within public institutions around the intersectionality of climate and social justice issues.

Despite this importance, civil society engagement faces multiple systemic and cultural barriers that prevent it from achieving structural influence. There is **limited institutional access** for CSOs. While CSOs may be invited to contribute during strategy development (e.g., public consultations), their input is often not integrated meaningfully into final documents. Moreover, CSOs are typically excluded from implementation and monitoring phases, leading to a sense of tokenism.

There is mutual mistrust between CSOs and the public institutions. A significant barrier to collaboration is the **lack of mutual trust**. Civil society actors often view public institutions as rigid, non-transparent, and politically motivated. In turn, institutions may perceive NGOs as confrontational or self-serving, rather than constructive. As quoted: “Most civil society organisations are not ready to work with the individuals in politics or institutions. They like to fight instead of working closely.” This adversarial framing prevents the formation of strategic alliances and undermines the potential for co-designed or co-implemented policies.

The cooperation of the CSOs is weak not only with the public institutions but within the CSO or academia organisations. CSOs often operate independently of each other, leading to a fragmented sector with little shared advocacy. Similarly, coordination with academia and public institutions is minimal, limiting the impact of joint knowledge or collective pressure. There needs to be coordination and cooperation between universities, CSOs, and decision makers, otherwise certain groups alone cannot do anything.

There is disparity in CSO participation. Participation mechanisms often fail to reach a broad and representative set of civil society actors. Some CSOs (often well-connected, well-funded, or based in urban areas) dominate spaces for dialogue. Others, especially those in rural or marginalised communities, remain unheard. This imbalance skews the participatory process and risks reinforcing existing power asymmetries, while undermining legitimacy.

On the top of all mentioned barriers for CSO participation is also the lack of advocacy skills and negotiation capacity. Even highly educated or active individuals in civil society may lack negotiation skills, often expecting full compliance with their demands rather than engaging in strategic compromise. The majority of the CSO representatives do not understand what negotiation means thinking that ‘’if you do not achieve 100% than you failed’’. This results in frustration, disengagement, and missed opportunities for incremental but meaningful progress.

5.1.2.3 NGOs and foreign aid

There is scepticism among the population about the grant-driven NGO sector, which is seen as unsustainable and overly shaped by foreign donors’ shifting priorities. The rigid constraints imposed by donors (percentages for staff, indirect costs, materials) and similar such rules leave little room for innovation or true local ownership.

The dependency on foreign aid, coupled with lack of flexibility and trust, turns many projects into performative exercises rather than engines of real change. Many initiatives die as soon as the funding ends, reinforcing a culture of external dependence and limited long-term impact.

5.1.2.4 Economic Monocultures vs. Local Economic Ecosystems

Key structural challenges have been identified in many localities in terms of over-reliance on a single economic sector. This creates economic vulnerability and limits diversification. To solve this the local communities should broaden their perspectives to recognise opportunities beyond their immediate sectoral interests.

In contrast, the model promoted by Živinice emphasises economic interconnectedness, an ecosystem approach in which one industry naturally supports the emergence of others (e.g., cement production spurring packaging businesses). This "circular entrepreneurship" fosters resilience and lays the foundation for sustainable local development. It creates a robust local economy, as it encourages collaboration and mutual support among businesses.

Additionally, the emphasis on startups and micro-enterprises led by youth reflects a shift from dependence on large state enterprises (typical of socialist-era mindsets) to entrepreneurial self-reliance. Notably, Živinice registered over 200 youth-led startups in four years, demonstrating a proactive bottom-up transformation.

A significant cultural shift is also noted, where individuals are increasingly inclined to pursue self-employment rather than seeking traditional job security. During socialism, there was a dominant mindset favouring secure jobs in large companies, often with the expectation that these jobs would be passed down to children. The current reality is that such companies are becoming less sustainable, prompting a shift towards entrepreneurship and self-reliance.

5.1.2.5 Administrative Innovation as a Development Catalyst

A striking insight from Živinice is how administrative reform, especially the drastic reduction of business registration time to two hours, acted as a catalyst for private sector growth. As cited by a participant, this action facilitated the registration of more than 200 start-ups within the last four years, showcasing a vibrant entrepreneurial spirit. On the top of it, smaller businesses are seen as more accessible to marginalised groups because they typically require lower overhead costs and can operate with minimal staff. Such institutional agility stands in stark contrast to the broader bureaucratic stagnation typical in BiH. Fostering these smaller ventures is essential for economic resilience and flexibility, contrasting with the traditional focus on large companies.

There have been also administrative processes kick-started in the communities as an incubator and support system in the form of a business center, offering continuous administrative assistance to the citizens. This proactive governance model fosters citizen trust, encourages entrepreneurship, and draws both domestic and foreign investors. The success of this model underscores the

importance of local-level policy innovation when higher levels of government remain inert or obstructive.

Another example is based on the Živinice. The collapse of the once-dominant Konjuh wood processing plant was a pivotal moment in Živinice's transformation. Instead of falling into economic decline, the community used this crisis to redefine its economic identity, diversify its industrial base, and open new business zones. The transformation illustrates how economic rupture can serve as a catalyst for institutional innovation and rethinking development strategies.

There is a clear intent by local leaders in Živinice to export their development model to other local government units. Initiatives such as the creation of diaspora offices, agrotourism projects, and administrative openness were pioneering at the local level. The municipality's flexible and dynamic approach challenges traditional notions of public administration in BiH, often viewed as rigid and inaccessible.

The city also promotes inter-municipal cooperation across political and administrative divides, e.g., joint projects with Banovići and Lukavac, or collaboration on energy transition initiatives like the EU Coal Regions in Transition Platform and BH Sutra (with Sweden). This speaks to a **pragmatic, post-partisan approach** to governance that values functional cooperation over ideological alignment. These examples demonstrate how local governments can act autonomously and collaboratively even in a fragmented political landscape.

However, the city now faces spatial constraints: land needed for further investment is blocked by restrictive state-level laws, highlighting the tension between local needs and central authority – a recurrent theme throughout the study.

5.1.2.6 Early Warning Systems: Technological vs. Functional Reality

The study participants referenced to existing early warning systems, which theoretically can help prevent environmental disasters. However, the key theme emerging here is the disconnect between technological capability and functional implementation. In the example of Jablanica[7], the forecasts did exist, but the scale of the disaster was not anticipated, and no decisive preventive action was taken.

This reveals a **critical gap**: not necessarily a lack of data or forecasts, but a failure in risk communication, institutional trust, and public engagement. Even when information is available, if institutions fail to act or fail to communicate clearly, the value of early warnings is significantly reduced. From this perspective especially vulnerable are the elderly populations in rural communities as they cut from information sources and are physically and financially less capable of adapting or responding to such disasters. There is an implied inequality in access to early warning systems, both in terms of technology and institutional support.

It was also noted that many of the casualties were associated with the collapse of a nearby quarry that lacked adequate oversight. This event highlighted concerns

[7] Jablanica is a municipality in Herzegovina, located along the Neretva River. In October 2024, it was severely affected by heavy rainfall and landslides, which caused fatalities, destroyed homes, roads, and bridges, and left many areas isolated.

about the enforcement of safety regulations and the effectiveness of inspection services. As stated by FGD participants, “the human factor was a bigger issue than the natural one”. While the flood was caused by natural rainfall, its destructive impact was amplified by human decisions - or the lack thereof. This reflects a broader paradigm in disaster risk studies: **disasters are not purely “natural” events, but are co-produced by social, economic, and political structures.**

5.1.2.7 Gender Inequality and Structural Economic Barriers

The study identified a **critical intersection between gender inequality and economic exclusion**. There are a few contributing factors for the statement. Ownership of property remains a legal and social barrier for women, especially in rural areas, where patriarchal inheritance customs often persist despite legal frameworks. Many women are unable to access formal credit and finance mechanisms (due to lack of collateral or business scale) which limits women’s participation in high-capital sectors like energy. This becomes particularly significant in climate policy and energy transition, where decarbonisation and green entrepreneurship are framed as opportunities, but women are systematically locked out. This aligns with findings from the GESEP Analysis under the ESAP 2030+ strategy, which noted that gender issues were often addressed at the strategic but not operational level. Without structural reforms in property rights, financial accessibility, and capacity-building, women remain sidelined from benefitting or leading in green economic transformation.

5.1.2.8 Academic Silos and Lack of Interdisciplinary Synergy

A study participant observed that **universities in BiH remain slow-moving institutions, traditionally siloed by discipline**, and that the education system is failing to adapt to the needs of a rapidly changing world. Students often memorise mathematical formulas without understanding their meaning; one example cited was a classroom where no student could find the derivative of x^2. Such gaps, partly widened by the COVID-19 pandemic, reflect long-standing institutional inertia, overly bureaucratic curricula and political capture of educational institutions. The result is a system that promotes **rote learning over critical thinking**, leaving students ill-equipped for higher education, the labour market and the demands of modern transitions such as digitalisation and energy transformation.

University reflections reveal that **many young people are conservative, passive and risk-averse, especially in relation to mobility and cross-border opportunities**. Yet even brief international exposure (such as a one-week school in Pula) has produced dramatic mindset shifts, with students returning more motivated and eager for practical engagement. This highlights two critical issues:

- a persistent **mismatch between academic curricula and real-world skills**, particularly those needed for energy transition, digitalisation and social inclusion; and
- the **transformative potential of experiential learning and international exchange** in overcoming feelings of inferiority and fostering civic agency.

Across the school system, the situation has worsened. Basic subject knowledge has declined, and years of online education during the pandemic created significant learning gaps. With the rise of AI and large language models such as ChatGPT, rote memorisation is increasingly obsolete; the focus must shift to **critical thinking, media literacy and the ability to distinguish facts from misinformation**.

Despite a strong normative belief in the transformative power of education (not just formal schooling but **holistic learning that cultivates respect for diversity and civic responsibility**) multiple structural problems undermine its quality and credibility. Diploma inflation and commercialisation of knowledge erode trust, while ethnically segregated schooling blocks intercultural dialogue and reinforces social divisions. A cultural strain of **anti-intellectualism ("why should I go to school, I know everything") reflects deeper mistrust in institutions** and calls into question the role of learning in shaping responsible citizenship.

These findings underscore **the need for a comprehensive overhaul of the education system**, from primary schools to universities. Academic institutions should prioritise cognitive skills, critical thinking, media literacy and adaptability, and play a more active role in community engagement, knowledge transfer and policy development, particularly in complex transitions such as decarbonisation and digitalisation. Encouragingly, **interdisciplinary master's programmes**, such as new collaborations between engineering and economics faculties, signal a tentative shift in this direction.

In contrast to the static national framework, **some local government units** (such as Živinice) **are pioneering dynamic local approaches** to resilience and inclusion, building on entrepreneurial support, youth engagement, administrative flexibility, inter-municipal cooperation, diaspora involvement and inclusive planning. The success of these initiatives depends on **replicability, decentralisation of resources and external support** (EU, UN or other donor/state support) that can bypass state-level bottlenecks and work directly with proactive local actors.

Overall, the analysis points to the need for BiH to remove regulatory and administrative barriers that constrain local innovation, enable municipalities to access state or donor funding directly, embed youth, women and other marginalised groups as co-creators in transition strategies, and reform education to strengthen civic agency, practical skills and interdisciplinary thinking. Ultimately, the country's transformation cannot be dictated from above; it must be co-created from the local level upward, through responsive governance, social equity and structural inclusion.

5.2 Roles and Responsibilities, Participation and Representation

5.2.1 Comprehensive Overview of Findings

Primary data collected through FGDs and KIIs highlighted that **women** continue to carry a disproportionate share of unpaid care and household work, which limits their availability and capacity to participate in public life and decision-making. Despite formal gender equality frameworks, gender inequality remains entrenched due to persistent stereotypes, structural violence, and insufficient protection mechanisms. Gender activism in Bosnia has a strong legacy, but respondents warn against assuming success: "You might think we are champions, but we have a lot of gender-based violence with no place for women to go."

Cultural attitudes and social norms undermine legal progress. Habits and stereotypes still persist, even where formal changes have occurred. Coordination between gender institutions is fragile; the term "harmonisation" itself triggers resistance. Gender and social aspects are underrepresented in climate and energy discussions.

A major barrier to progress is the dissonance between progressive laws and regressive everyday realities. Without transformative social change and institutional ownership, gender equality remains symbolic.

During climate shocks and pollution events (such as floods, prolonged school closures due to smog), these care burdens increase significantly. Women described being forced to stay home to care for children and elderly relatives, missing income-generating opportunities. This reflects a wider pattern documented in BiH, where heavy air pollution (among the highest in Europe) has direct and indirect social consequences. Smog episodes in Sarajevo, Tuzla, Zenica and other urban centers regularly result in school closures, strained healthcare systems, and increased household workloads. International agencies (e.g., UNICEF, World Bank, WHO) have noted that these dynamics reinforce cycles of poverty and exclusion, as women's unpaid care work expands during environmental crises while their economic opportunities shrink.

Community consultations also underscored that while women often lead informal coping strategies at the household and neighbourhood level (such as organising childcare when schools are closed or pooling resources during floods) their voices are rarely heard in formal climate or energy policy fora. This disconnect creates a situation where women are central to managing climate impacts on the ground but remain absent from shaping solutions.

The desk review confirmed and further contextualised these findings. Although BiH has a Law on Gender Equality and is a signatory to CEDAW and the Istanbul Convention, women remain underrepresented in climate and energy decision-making bodies at both national and local levels. Representation is especially low in technical ministries and agencies, where climate and energy policies are designed.

The GAP BiH 2023–2027 further highlights these gaps, noting persistently low women's representation in leadership positions across politics and public administration, and calling for increased participation of women in decision-making, including in climate, energy, and environmental policy areas. Initiatives such as the Gender and Climate Coalition, launched by UNDP in partnership with UN Women and the Gender Equality Agency, have created new spaces for dialogue. However, the Coalition's institutional influence remains limited, and its recommendations are not systematically embedded in formal policymaking processes.

The UNDP Blueprint for a Gender-Responsive Just Transition further warns that without deliberate inclusion, women (particularly Roma women, single mothers, and those in rural areas) risk being left out of the benefits of the energy transition. The Blueprint's mapping of vulnerable groups shows that these women face overlapping disadvantages: low participation in labour markets, disproportionate exposure to pollution, and exclusion from decision-making. Primary data echoed this finding, as women in rural FGDs reported that consultations on energy-efficiency and clean-heating programmes rarely reached their communities, and that they often lacked access to clear information about such initiatives.

Youth and children are among the groups most directly affected by pollution and climate change in BiH. They experience the health impacts of poor air quality, including asthma and respiratory illnesses, while also facing disruption of their education during prolonged smog episodes and extreme events. Yet, despite showing strong engagement and concern for climate justice, youth remain largely excluded from decision-making processes. They lack institutional platforms, mentorship opportunities, and civic engagement channels that would allow them to shape climate and energy policies. This generational disconnect (between progressive, engaged young people and risk-averse older decision-makers) creates frustration and weakens long-term climate governance.

Young people from marginalised or low-income backgrounds face multiple and intersecting barriers to participation, including limited financial resources, and lack of access to networks. Roma youth and youth with disabilities are particularly excluded, as they encounter both systemic and structural obstacles to education, employment, and civic engagement. Multiple studies highlight that Roma adolescents in BiH face school enrolment and completion rates far below the national average (secondary school attendance among Roma is often less than 20%) driven by poverty, discrimination, and early marriage (UNICEF 2022[8]; World Bank 2023[9]). Youth with disabilities similarly experience low transition rates from education to the labour market, with inadequate inclusive education policies and limited vocational training opportunities (UNDP 2021[10]). Both groups are under-represented in youth councils, political parties and formal decision-making

[8] UNICEF. Situation Analysis of Roma Children in Bosnia and Herzegovina. 2022

[9] World Bank. Bosnia and Herzegovina Poverty Assessment: 2023 Update. 2023

[10] UNDP. Disability and Development in Bosnia and Herzegovina: Challenges and Opportunities. 2021.

structures, reflecting persistent barriers to civic participation and a lack of targeted outreach by public institutions (Council of Europe 2022[11]).

This exclusion perpetuates **cycles of disempowerment**, where those most motivated to drive climate action are denied opportunities to do so.

At the same time, as highlighted in several KIIs and FGDs, youth represent an enormous potential resource for climate action in BiH. These findings highlight that their leadership, innovation, and digital literacy can be leveraged to advance clean energy, green jobs, and community-level adaptation. Ensuring their meaningful participation would not only increase the legitimacy of climate governance but also bring new perspectives, ideas, and long-term sustainability to policy solutions.

The study underscores the importance of creating structured opportunities for young people by establishing local youth climate councils or hubs, offering mentorship schemes and micro-grant programmes to support youth-led initiatives, and promoting regional exchanges that link BiH youth with climate-justice movements and innovation hubs across the Balkans and beyond. Integrating climate education and civic engagement into school curricula is equally essential to prepare the next generation for leadership in climate resilience.

Taken together, the evidence illustrates a persistent gap: **women, marginalised communities, and underrepresented groups in BiH bear the heaviest burdens of climate change and pollution yet remain sidelined from the very governance processes that could address these challenges**. These exclusions are compounded by **intersectionality**, where overlapping identities (such as gender, age, ability, socio-economic status) create layered disadvantages and heightened risks. Bridging this gap requires not only legal frameworks but also stronger enforcement, targeted capacity building, and mechanisms that guarantee meaningful and inclusive participation. When diverse groups are genuinely included in decision-making, policies become more equitable, responsive, and effective, ensuring that climate action and energy transition delivers tangible benefits for all segments of society.

> *"Decision-making is fragmented, centralised, and often inaccessible:*
>
> *Community members feel excluded… climate and energy policymaking is highly centralised, technical, and often disconnected from community needs."*

[11] Council of Europe. Roma Youth Participation in Public Life in the Western Balkans. 2022.

5.2.2 Detailed Insights from Community and Stakeholder Consultations

5.2.2.1 Youth participation

Youth are impacted by climate change mental health impacts. Pollution and heatwaves reduce motivation, affect sleep, and trigger anxiety. Air pollution becomes both a physical and psychological burden. There are emotional disconnection and scepticism toward civic participation. As mentioned by an interview participant from Zenica:

> *"The problem with youth is that we don't believe we can do anything. We don't believe in ourselves."*

This statement is both a personal reflection and a broader social critique: young people lack belief not because they are apathetic, but because they are excluded. They don't see change as something they can influence. This disillusionment is magnified by:

- Lack of institutional support (resources, access, platforms);
- Tokenistic engagement (being asked for input without seeing results);
- Wider social instability (corruption, poor governance, ethnic division).

It further creates a generational gap approach and perceptual divide, while the older citizens often don't link local problems to climate change, youth are increasingly engaged. As quoted:

> *"Some people can't connect climate change to the BiH context—they see it as something happening far away, with penguins and polar bears."*

This speaks to the need for localised communication strategies that reflect lived realities and make climate change visibly and emotionally legible to all.

Young people need to be shown visible impact stories. Youth want proof that activism works. Stories like the women of Kruščica[12] resisting hydropower projects should be widely promoted through youth-cantered media. Social media is often the primary communication platform for youth; thus, the usage of short climate stories and campaigns are the most recommended. Or there should be a mechanism for appreciation applied for youth participation. While this could be

[12] Riverwatch. 2020. "Brave Women Kruščica Join Forces with Residents of Shushica Valley to Fight against Water." *Balkan Rivers News*. https://riverwatch.eu/en/balkanrivers/news/brave-women-kru%C5%A1%C4%8Dica-join-forces-residents-shushica-valley-fight-against-water

interpreted as instrumentalism it is important for youth to understand their participation is important, and they are visible to the decision-makers.

On the other hand, young people often just need an initial incentive and a gentle nudge to begin organising themselves. The devastating floods that struck parts of BiH served as a major turning point in local environmental activism. As quoted by the youth "On the first day, we were all caught off guard, shocked, and afraid. The only feeling we had was just to help others, so we were all part of actions, collecting food, clothes, etc." This quote illustrates a profound sense of collective empathy and spontaneous civic engagement. Despite fear and confusion, the immediate instinct was to assist those in need, showing strong community cohesion during crises. In response, an initiative was swiftly launched to clean the Doljanka River, with broad participation from youth across the country. This collective effort showcases a sense of urgency, solidarity, and youth mobilization in the face of ecological disaster. It also underscores the importance of practical, hands-on initiatives in building environmental consciousness.

However, these reactions by youth are reactive instead of being proactive. This is because preventive actions are rare and mostly community mobilization happens after environmental disasters. As stated:

> *"Often, all actions and activism are well initiated after something big and sad… we react to consequences, rather than preventatively."*

This indicates a pattern of event-driven activism rather than sustained civic engagement, which is tied to broader systemic issues like education and institutional trust.

Youth are not only responding to crises: they're also critically analysing their root causes. A recurrent theme is the unsustainable exploitation of natural resources, such as: "The biggest problems are uncontrolled forest logging and illegal quarries, which have been a problem for many years." These observations point to widespread awareness of environmental mismanagement and the link between human activity and ecological disaster. Illegal practices, like logging and quarrying, are not viewed as isolated problems but as systemic contributors to flood risk and environmental instability.

Or another simpler example recalled by the youth participating in the study: **"Let's Do It"** workshops in Zenica, during which flowers were planted in local parks, small but meaningful steps toward urban greening and community beautification. Such actions reflect the integration of environmental stewardship into local identity and communal responsibility, especially among younger generations.

While youth engagement is commendable, their experiences also expose systemic limitations. Access to accurate, timely information during disasters was lacking, and broader structural issues (e.g., weak environmental governance, inadequate urban planning) remain unresolved. As such, youth called for more robust education, government accountability, and community-based resilience measures.

Youth express appreciation for local efforts, such as schools supporting flood victims, but there is a noticeable absence of trust or mention of national-level environmental governance. Their narratives suggest:

- A **lack of institutional visibility** in climate change mitigation;
- **Perceived inefficacy** of regulations or preventive strategies;
- A sense of **isolation**, where community members feel responsible for solving problems in the absence of adequate government intervention.

Regional differences in youth activism are evident. Youth in Serbia are viewed as more active and "ready" for change compared to their peers in BiH. The findings point to the need for stronger regional youth cooperation, supported through international student exchanges that help break stereotypes and foster reconciliation.

5.2.2.2 Women as Active Agents, Not Passive Victims

While throughout the report we have observed gendered negative impact of climate change especially on women, there are also positive examples of how women activism shifts the narrative from disengagement to active resistance and protection of public goods. Examples like the Kruščica women's river protest reveal women not just as affected groups but as frontline defenders of nature. This counters the dominant narrative of women as only vulnerable. Instead, they are often the organisers, the knowledge holders and the bridge-builders between community and policy.

Despite their involvement, women remain underrepresented in energy transition decision-making, especially in technical and leadership roles. Green jobs are still male-dominated, and women in administrative roles in coal regions face uncertain futures without support for retraining or inclusion in just transition planning.

The findings underscore the need to strengthen mechanisms for women's participation (such as gender-sensitive budgeting, reserved seats for women and marginalised groups in climate councils, and support for women-led NGOs working at the intersection of climate and gender) alongside legal recognition of local protest and advocacy.

5.2.2.3 Communication and the Role of the Media

Across different groups in BiH, the media is recognised as a **crucial tool for informing, engaging, and mobilising** the public around environmental issues, particularly climate change, air pollution, and energy poverty. However, its **impact and reach vary significantly by audience**, from older generations who rely on traditional outlets like television and news, to youth and marginalised groups who engage more with **social media, influencers, and peer networks**.

Young people especially emphasise the importance of positive storytelling. They express fatigue from the constant stream of negative news, which often leads to apathy. Instead, they call for media to highlight local success stories, community

efforts, and inspiring examples of action, believing these can spark optimism and motivation. Influencers, TikTok content, and creative digital campaigns are identified as effective channels to reach youth, provided the content is engaging, relatable, and emotionally compelling. For groups with low literacy or limited access to information, such as people with disabilities, audio-visual content, voice messages, and community-based media are more accessible and inclusive.

Building on this, access to information (especially in formats people can understand and use) is critical for making informed decisions in everyday life. Interviewees reported relying on smartphone applications (e.g., AccuWeather) or TV forecasts to plan their day. They demonstrated a generally good understanding of weather forecasts, with many adjusting their behaviour and clothing based on predictions. However, when it comes to air quality, few actively check reliable data, often relying instead on visible indicators like car exhaust. This suggests not only a gap in consistent access to air quality information but also highlights barriers such as digital literacy or lack of relevant, user-friendly tools.

Communication emerges as both a barrier and a potential solution in addressing **public health concerns.** Young people emphasize that effective communication must be tailored to specific audiences, considering factors such as age, interests, and media consumption habits. Without this tailoring, messages risk being overlooked or misunderstood.

However, current public health messaging often falls short of this standard. Youth criticize the passive and vague nature of warnings like “the air is bad,” noting that such statements are not only unhelpful but can also be counterproductive. One rhetorical question captured this frustration: “If the air is bad, people should not go out? Does this mean there should be no schools operating, no going to work?” This highlights the confusion and impracticality that can result from unclear communication.

There is widespread agreement on the need for clearer, more targeted, and actionable information. This is particularly urgent for vulnerable groups (such as people with disabilities) who may not have access to traditional or mainstream communication channels. Adapting messaging to meet diverse needs is essential for equitable and effective public health communication.

5.3 Power and Decision-Making

5.3.1 Comprehensive Overview of Findings

Primary data gathered through KIIs and FGDs revealed widespread perceptions of exclusion and distrust in political processes related to climate and energy. Community participants, particularly women, Roma representatives, youth, and disability rights groups, emphasised that they are rarely consulted in decision-making, and when they are, the process feels symbolic rather than meaningful.

Respondents in several municipalities described consultations as “tick-box exercises” without real influence on policy outcomes.

BiH is formally committed to gender equality through instruments such as CEDAW, the Istanbul Convention, and UNSCR 1325, and has national legislation including the Law on Gender Equality. However, implementation of these commitments in the climate and environmental sector remains weak. Climate policymaking is still dominated by technical ministries focused on energy and infrastructure, with limited systematic input from health, social, or gender institutions. This siloed approach has reinforced existing power imbalances and limited opportunities for inclusive governance. The GAP BiH 2023–2027 recognises these systemic challenges and calls for stronger institutional coordination, greater accountability, and the integration of gender equality principles across all sectoral policies (including environment, energy, and climate change) underscoring the need to embed GESI considerations beyond legal commitments and into practice.

National climate frameworks such as the NDC and draft NECP illustrate this gap: while they set ambitious emissions-reduction targets, they lack GESI integration, gender impact assessments, or disaggregated monitoring indicators. The Environmental Strategy and Action Plan (ESAP 2030+) marked a step forward by explicitly integrating gender and social equity, yet its influence on decision-making has so far been modest and uneven. Stakeholders interviewed for this study frequently pointed to the gap between progressive language in strategies and the lack of enforcement or follow-through at the municipal level.

International initiatives have provided some entry points. The Gender and Climate Coalition, co-led by UNDP, UN Women, and the Gender Equality Agency, has worked to mainstream gender in climate action. Similarly, the UNDP/UNEP-supported Global Support Programme helped generate gender-disaggregated socio-economic data during pilot projects. Yet, as both the desk review and local interviews noted, these initiatives remain project-based and have not been fully institutionalised within decision-making structures. As a result, marginalised and underrepresented groups (such as women, youth, Roma, persons with disability) continue to be largely absent from climate and energy agenda-setting and resource-allocation processes.

Overall, the study shows that while BiH has strong formal commitments, the actual distribution of power in climate and energy governance is highly unequal. Tokenistic inclusion remains the norm, and decision-making processes rarely reflect the priorities of those most affected by pollution, energy poverty, and climate change. Strengthening accountability mechanisms, embedding GESI systematically in climate frameworks, and creating formal, accessible platforms for marginalised groups to shape decisions are critical steps to redress entrenched imbalances.

> *Women remain excluded from leadership in energy and environment.*
>
> *"In energy, environment sector, there is only 18% [women] and only 6–7% are on decision-making levels."*
>
> *Policymaking is centralised and often disconnected from vulnerable groups. Local institutions lack clear guidelines for participation.*
>
> *"We are missing bylaws or guidelines… when they are organising participation, they are missing basic rules."*

5.3.2 Detailed Insights from Community and Stakeholder Consultations

A candid critique emerged regarding BiH's fragmented political system, which is described as a smokescreen for systemic corruption. Ethnic identity, an abstract and manipulatable construct, is used to obscure accountability and derail reform agendas. This further delays necessary socio-economic and institutional transitions.

5.3.2.1 Structural Blind Spots: Where Policy Fails to Reach

There are several gaps and blind spots that emerged throughout the discussions. The first one is lack of monitoring and user education. Even when eco-friendly infrastructure is provided, recipients lack the knowledge or support to use it effectively. As one participant analogised, it's like owning a car but ignoring the check engine light. The second one is policy without practice. Interviewees describe situations where policy exists but is not enforced, maintained, or monitored—e.g., chimneys without filters, unregulated biomass burning. And finally, absence of accountability: while responsibilities are theoretically allocated (e.g., climate focal points), in practice, no one monitors progress at a national level, particularly on-air pollution.

5.4 **Norms, Attitudes, and Practices**

5.4.1 Comprehensive Overview of Findings

Primary data from FGDs and KIIs revealed that entrenched patriarchal norms continue to shape gender roles and limit women's economic independence in BiH. Women reported being excluded from inheritance processes and property ownership, often leaving them dependent on male relatives for access to land and housing. This not only restricts women's ability to accumulate assets but also constrains their opportunities to secure credit, invest in energy-efficient technologies, or participate in climate-resilient livelihoods.

Community participants also highlighted the normalisation of harmful practices in response to economic hardship. Many households (especially low-income families and Roma communities) reported burning low-quality coal, wood, or even waste materials such as plastics and tires to meet basic heating needs. Some participants stressed that while they were aware these fuels damaged their health and the environment, they had few affordable alternatives. This practice was often framed as a "necessity for survival" rather than a choice.

The desk review confirmed these patterns. The GAP BiH 2023–2027 acknowledges that persistent patriarchal norms and gender stereotypes continue to undermine progress and emphasises the need for targeted awareness campaigns and education programmes to shift attitudes and promote equality.

National statistics show that only around 30% of land is owned by women. These inequalities reinforce women's dependency and limit their adaptive capacity to respond to environmental risks. This aligns with FGDs where Roma participants described respiratory illnesses linked to indoor air pollution and overcrowded, poorly insulated housing.

The review also highlighted broader cultural and institutional attitudes. Environmental issues are often regarded as technical matters reserved for specialists, rather than social concerns requiring inclusive debate. This perception contributes to the marginalisation of women, youth, and vulnerable groups in policy processes. KIIs echoed this, with several experts noting that climate and energy discussions are dominated by engineers and economists, with little space for gender and inclusion experts, academia, social workers, or community representatives. Low public awareness of the health impacts of pollution was also a recurring theme, particularly outside urban centers.

Together, the evidence shows that harmful norms and practices both exacerbate environmental risks and reinforce social inequalities. Addressing these requires tackling structural discrimination, expanding access to affordable clean energy, and reframing environmental issues as social justice concerns rather than purely technical challenges. Building public awareness and empowering marginalised communities to advocate for healthier environments are essential steps toward shifting these norms.

Patriarchal norms and limited awareness undermine climate engagement.

"Educated women are not even aware what climate change means for them… vulnerable people are coping just to survive."

Social stigma and stereotyping continue to exclude Roma and informal workers.

5.4.2 Detailed Insights from Community and Stakeholder Consultations

5.4.2.1 Coping Strategies in Difficult Weather Conditions

Study participants use basic strategies like adjusting clothing, staying indoors, or carrying umbrellas and water based on severe hot or cold weather. Some avoid going out during polluted or extreme weather days. This was especially highlighted for the capital city Sarajevo where winter conditions were described as particularly harsh and challenging.

Not all strategies are accessible to everyone. Some people, for instance, cannot wear a mask due to discomfort and suffocation, illustrating how health or sensory sensitivities may limit effective protection.

5.5 Safety, Protection, and Wellbeing

5.5.1 Comprehensive Overview of Findings

Primary data collection revealed that the health impacts of air pollution and climate change are acutely felt across BiH, but they fall disproportionately on marginalised communities. FGDs in Sarajevo and Tuzla described children and elderly people suffering from chronic coughs, asthma, and recurring respiratory infections during winter smog episodes. Community participants also reported that persons with disability and elderly rural residents faced barriers in accessing healthcare facilities, particularly during peak pollution or flooding events when mobility and transport were restricted.

KIIs with independent experts and health professionals echoed these concerns, stressing that healthcare systems are overstretched during pollution crises and lack the resources to provide preventive care.

The review also underscored gaps in healthcare access and equity. Marginalised groups (including Roma families living in informal settlements, people with disabilities, and the rural elderly) have less access to timely healthcare during pollution events. Discrimination, cost barriers, and geographic isolation limit their use of services. CCAC analysis on short-lived climate pollutants highlights how measures to reduce black carbon and methane could quickly improve health outcomes, but these co-benefits are not yet systematically communicated or leveraged in health policy.

Both primary and secondary evidence also indicate that pollution and climate impacts are influencing demographic and migration patterns. Families with means are relocating from highly polluted urban centres or emigrating abroad, while poorer households remain trapped in deteriorating environments. This dynamic

further exacerbates social inequalities, as the most vulnerable populations remain most exposed to environmental and health risks.

While the study notes the lack of disaggregated data, there is a need for deeper analysis of how this gap undermines effective monitoring and policymaking. Health statistics on air pollution-related illnesses are rarely broken down by sex/gender, age, or disability, making it difficult to identify which groups are most at risk. Similarly, energy poverty data is often presented in aggregate form, obscuring the specific challenges faced by female-headed households or Roma communities, or elderly households. Without disaggregated information, policies remain too general and fail to respond to the realities of vulnerable groups, resulting in missed opportunities for more targeted and effective interventions.

In sum, the combined analysis shows that air pollution and climate change pose a serious public health crisis in BiH, compounded by unequal access to healthcare and protection systems. Without disaggregated data, marginalised communities remain invisible in policy planning. Strengthening health system preparedness, ensuring equitable access to care, and prioritizing vulnerable groups in pollution and disaster-response planning are essential to safeguarding wellbeing.

> *Health risks from pollution disproportionately affect those with limited healthcare access.*
>
> *Deaf persons were excluded from flood warnings due to lack of sign language interpretation in media.*
>
> *"During the recent floods… the mainstream media was missing signs for deaf persons."*

5.5.2 Detailed Insights from Community and Stakeholder Consultations

5.5.2.1 Unequal Impacts of Climate Change

There has been a common initial perception among the interview participants that "everyone suffers equally from the climate change impact no matter of the age and gender". Alternatively, when probing deeper it revealed that **marginalised populations (especially people with disabilities, women, and children) experience uniquely difficult climate-related circumstances**. Some of the barriers for these marginalised groups are: for persons living with disability/ies - lack of accessible and adapted information (inclusive of emergency information), for women- Increased household and caregiving burdens during climate events, for children- disproportionate respiratory health risks from air pollution, for girls it may cause specific development risks in relation to reproductive health. These discrepancies

suggest a **dangerous erasure of differentiated vulnerability**, reinforcing the importance of **intersectional analysis in disaster risk management**.

Environmental injustice is acutely present, often the poor families live closer to industrial zones, increasing exposure to air pollution and increasing the risk of health issues. Poor housing fuels are significant contributors to chronic disease, especially respiratory conditions like COPD and cancer. The use of toxic fuels (e.g., burning tires) in homes and urban air pollution is seen as urgent health issues with insufficient public or governmental response. As quoted:

> *"Public awareness is at a very low level... People have a three-story house and burn tires to warm it up."*

From the geographical perspective the public health impacts of air pollution are severe in highly polluted cities like Sarajevo and Tuzla. Children in similar cities are 50% more likely to develop respiratory conditions such as asthma or bronchitis than children in cleaner environments. However, despite this grave situation, **systematic and localised health surveillance is lacking**. Data is either outdated, uncoordinated across entities, or insufficiently granular to inform targeted health or environmental interventions.

A pulmonologist offers an evidence-based narrative of air pollution as a structural threat: "The most vulnerable are children, chronic patients, people with respiratory and cardiovascular diseases." Air pollution is no longer sporadic but chronic and pervasive, especially in urban valley cities like Sarajevo. The health impacts are not only physical but social and economic - missed school, absenteeism from work, increased healthcare burdens, and long-term medical costs. "People can't get sick four times a month from infection, this is a systemic environmental response" - he states. The body becomes a canvas upon which the long-term failures of climate governance are etched. This narrative underscores the invisible, slow-onset violence of climate change, affecting BiH's future generations even before they reach adulthood.

As he technically and in detail explains air pollution affects the human respiratory system. The narrative connects pollution to long-term structural damage, particularly among vulnerable populations. He emphasizes that exposure to pollutants such as PM particles, sulfur dioxide, and nitrogen dioxide results in both acute and chronic diseases, which are often irreversible and expensive to manage. He states: ""Our body has a defense mechanism. But that defence is not permanent… If you are constantly exposed, that defense will eventually collapse."

5.5.2.2 Material progress VS. social reality

The material conditions have improved compared to the past - people have phones, cars, internet, electricity. Yet this access creates an illusion of prosperity, masking deeper forms of social inequality and disempowerment. One of the participants stated: "The mobile phone gives the people the illusion that they have more than

they had in the past... Poverty is relative." There is disuse of rural resources (such as abandoned villages and empty gardens) arguing that poverty is often reinforced not only by systemic barriers but also by attitudes of apathy or laziness. Many people have the means to improve their conditions (e.g., by growing food) but choose not to. Here mentality is seen as both the root of the problem and the potential site of transformation where the change should start from each person through self-reflection. There is a need for greater intergenerational engagement, beginning with young children in schools and kindergartens.

Early environmental socialisation is of utmost importance. In this process individuals, particularly children, learn about the environment, develop attitudes and values related to nature, and adopt behaviours that reflect environmental responsibility. Clean-up actions, eco-clubs, tree planting, and discussions at schools are valuable example contributing to this process.

5.6 Cross-Cutting Issues

5.6.1 Comprehensive Overview of Findings

This section delves into the **cross-cutting themes identified in the discussions surrounding community resilience, youth engagement, gender dynamics, and socio-economic vulnerabilities in the context of climate change**. By examining these interconnected themes, we can better understand how they influence one another and shape the experiences of various community members. The insights gathered highlight **the critical role of young people in driving positive change, the disproportionate impacts of climate challenges on women, and the systemic barriers faced by marginalised groups.** Together, these themes underscore the **necessity for inclusive and equitable approaches** to foster resilience and sustainability within communities.

5.6.2 Detailed Insights from Community and Stakeholder Consultations

5.6.2.1 Youth Engagement in Community Resilience

Youth can play a vital role in community resilience by taking initiative and leading environmental efforts. There is potential for young people to organise themselves into concrete projects, such as cleaning rivers and forests. This can be supported by the idea of witnessing successful projects as a motivational force indicating that positive examples are essential for inspiring further action among peers. This aligns with the overarching theme of building community momentum through active youth participation, which is crucial for fostering a culture of environmental stewardship. Youth are seen as a mobilising force, but their actions often **lack institutional support**. While their involvement can be empowering and foster a sense of

ownership, their impact is unsustainable if it depends solely on voluntary enthusiasm. Structural support from adults, schools, and government is crucial to translate motivation into systemic change. Youth engagement into climate and social resilience should be embedded in **long-term strategies and policy support frameworks**.

5.6.2.2 Gender Dynamics and Household Responsibilities

There is a significant burden that climate change places on women, who are already responsible for the majority of household chores. Per the practices mentioned by the interview participants women perform over 90% of domestic labour. As one of the participants quoted:

> *"Women have less land, care for children, and have fewer options to protect themselves."*

Climate change will exacerbate these challenges further, making daily tasks more difficult and time-consuming. This reflects the **intersection of gender and environmental issues**, where women, particularly in vulnerable communities, face compounded challenges due to their roles as caretakers. The emphasis on women's experiences with water shortages illustrates how climate impacts are not gender-neutral, underscoring the **need for gender-sensitive approaches in climate action**.

5.6.2.3 Socio-Economic Vulnerabilities

A number of socio-economic vulnerabilities are faced by marginalised groups, particularly the Roma community. Especially the uneducated women of the Roma community are the most socio-economically vulnerable group in the region. However, it is important to note that the Roma community represents one of several groups experiencing acute poverty. National data[13] show that approximately 16% of the population lives below the poverty line, with rural populations, unemployed youth, elderly persons, and persons with disabilities also facing severe deprivation. These groups often struggle to meet their basic needs and lack representation in decision-making processes. This **systemic exclusion** hinders their ability to advocate for their needs and access to resources, which is critical for effective participation in climate action. The mention of the Roma community's lack of institutional representation underscores the **need for inclusive policies that address the specific challenges faced by marginalised populations.** Inclusion must go beyond project-based activism and be embedded in governance structures.

[13] Borgen Project. *Facts about Poverty in Bosnia and Herzegovina.* Accessed [insert date]. https://borgenproject.org/facts-about-poverty-in-bosnia-and-herzegovina/

5.6.2.4 Barriers to Participation and Representation

There are persistent barriers to gender equality and representation in various sectors. Despite progress in education, such as the increasing number of women in forestry, traditional attitudes and stereotypes continue to influence career choices and limit women's participation in decision-making roles. As quoted by one of the participants:

> *"Women are present in ministries but rarely in decision-making roles".*

This reflects broader societal issues where gender norms restrict opportunities for women, particularly in emerging fields related to climate change and energy transition. The **need for systemic change to dismantle these barriers** is evident. Energy and climate policies must adopt a just transition framework that includes intersectional gender, socio-economic status, and ethnic considerations.

From the energy and climate policy perspective, there is growing awareness and effort to mainstream gender-responsive budgeting, integrate vulnerability indicators, and design inclusive subsidy mechanisms. However, current frameworks remain underdeveloped and inconsistent.

Persons with disabilities are largely excluded from the processes of shaping energy policies, as their immediate priorities (employment, independent living, legal protection) often take precedence over "abstract" issues such as climate change. This further highlights the importance of an intersectional approach to a just transition that takes into account the different capacities and priorities of social groups.

Several themes that help explain why more people aren't currently involved emerged. One of the reasons relies on lack of awareness and information. Many community members, especially in rural areas, are not aware of available resources or the specific steps they can take to prepare for or prevent disasters. This is followed by technological gaps: without mobile alert systems or other rapid communication tools, people are often uninformed or too late to react to threats like floods or fires. Another reason is the **institutional disconnect**. Local communities, especially youth, are often excluded from decision-making spaces or see those spaces as inaccessible. Wrapped up by fatigue and distrust: after repeatedly witnessing institutional failure **some residents may feel that participation doesn't lead to meaningful change.**

Weather itself was mentioned as a barrier to well-being and participation. Participants described discomfort and disruption in their routines due to extreme or changing weather conditions. Many linked poor weather (rain, cold, rapid changes) with low mood, fatigue, and even physical symptoms such as headaches and dizziness.

On the other hand, when it is sunny people tend to feel good and less anxious. There has been individual variation noted in the perception and practices due to

weather changes. While some participants were unaffected by weather, others reported sensitivity to changes, especially quick shifts in weather and pollution levels. This reveals differential vulnerabilities likely tied to age, health, and socio-economic status. This was spiced up with seasonal allergies affecting the health, mood and motivation of some of the participants. While allergies are mostly inherited, they can also develop from constant mucosal irritation. Climate change worsens this by increasing pollen, pollution, and wildfire smoke, all of which can irritate airways and trigger new allergies over time. No population group is exempt, neither the youngest nor the oldest. Even older individuals with no previous signs can develop allergies.

As observed, there are interconnected themes of youth engagement, gender dynamics, socio-economic vulnerabilities, and the need for systemic change in the context of climate resilience. Addressing these themes holistically is crucial for building resilient communities that can effectively respond to the challenges posed by climate change. Empowering young people, particularly women and marginalised groups, through inclusive policies and community initiatives will be vital for fostering sustainable development and resilience.

5.6.2.5 Enablers to participation and representation

One of the most powerful enablers of participation lies in the belief that **small changes can lead to bigger impacts**, a mindset that can guide communities and empower local initiatives. When individuals feel a sense of ownership over a project or cause, they are far more likely to get involved. This is especially true at the hyper-local level, where actions like creating community gardens, planting trees, or organizing local waste management efforts provide tangible, visible outcomes that reinforce continued engagement.

Building on this foundation, **young people** have expressed a strong appetite for **climate education and leadership opportunities**, signaling another critical avenue for increasing participation. To support this, there is a clear need to integrate climate literacy into formal education systems, both through school curricula and extracurricular programs. Simulation exercises, climate clubs, and youth councils that are directly connected to municipal planning processes can serve as platforms for meaningful youth involvement. These structures not only build knowledge, but also create pathways for long-term civic engagement.

A third key enabler is the **development of effective Early Warning Systems (EWS**). Several respondents noted that people are more likely to act if they receive timely, localised alerts about environmental risks, such as floods, fires, or poor air quality. Introducing automated systems, whether through SMS or user-friendly mobile apps, could significantly improve responsiveness. By delivering not just warnings, but also practical guidance on what to do, these systems would shift people from passive recipients of information to active participants in their own safety and resilience.

However, participation cannot be sustained without supportive policy frameworks. While national strategies like the 1325 Plan on Women, Peace and

Security offer an important starting point, they often remain detached from local realities. To truly enable inclusive participation, these frameworks must be translated into community-level action. This means municipalities need to be held accountable for engaging diverse groups (including women, youth, and other marginalised populations) in the co-creation of resilience strategies. Only when local communities are meaningfully involved in planning and implementation will these strategies become effective and relevant.

Taken together**, these enablers** (ownership at the local level, youth education and empowerment, accessible early warning systems, and inclusive policy implementation) form an **interconnected ecosystem of participation**. When supported collectively, they create the conditions for communities to move from reactive to proactive, and from passive beneficiaries to active agents of resilience and change.

5.7 Intersectionality

5.7.1 Comprehensive Overview of Findings

The study confirms that **vulnerabilities in BiH are not experienced uniformly but are compounded by overlapping identities** such as gender, age, disability, income level, and geographic location. Intersectionality reveals how these multiple layers of disadvantage shape exposure to pollution, access to energy, and participation in decision-making.

Community consultations and KIIs highlighted that elderly women in informal settlements are among the most at risk. Roma elderly women are exposed to even higher risks. They face age-related health vulnerabilities, limited access to healthcare, poor housing conditions, and systemic discrimination. Similarly, women and single mothers living in rural areas struggle with high energy costs, restricted access to credit, and heavy caregiving responsibilities, leaving them particularly exposed during pollution episodes and climate shocks. Youth with disabilities experience exclusion on multiple fronts (education, employment, and climate governance) while Roma informal waste pickers endure unsafe working conditions and health risks without legal or institutional protections.

> *One KII noted: "Single mothers, households that are headed by women, elderly people for sure, and people with disabilities are consistently the most affected". Another stressed that "during the recent floods… the mainstream media was missing signs for deaf persons. So it is not inclusive".*

These examples illustrate how air pollution and energy poverty intensify pre-existing inequalities, while mitigation and adaptation policies often fail to recognise the realities of those at the intersection of multiple disadvantages.

Without disaggregated data and targeted measures, intersectional vulnerabilities remain invisible in policy and practice.

> *Multiple vulnerabilities intersect (gender, ethnicity, age, disability, income).*
>
> *"Elderly Roma women, rural single mothers, or youth with disabilities face compounded risks not adequately captured by policies or data."*
>
> *Informal waste pickers (mainly Roma) are unprotected and excluded from formal schemes.*
>
> *"They don't protect themselves even when collecting waste… this needs to be formalized or supported differently."*

Applying an intersectional lens is therefore critical for effective climate action. It enables policymakers and practitioners to move beyond one-size-fits-all solutions and design interventions that respond to the complex, overlapping needs of BiH's most marginalised communities.

6 Key Findings

The GESI study in BiH, based on KIIs, FGDs, community consultations, and a supporting desk review, identified the following key findings:

6.1 Air Pollution as a Systemic Crisis

- Community voices described air pollution as one of the most visible and immediate challenges, with winter smog disrupting daily life in Sarajevo, Tuzla, Zenica, Banja Luka and other urban centers. Participants highlighted school closures, rising health problems, and psychological stress as recurrent consequences. Women reported intensified care burdens during smog events, as they were responsible for both children at home and relatives with chronic illnesses.
- Desk review findings confirmed that BiH has some of the highest levels of PM2.5 exposure in Europe, with an estimated **3,300 premature deaths annually** and economic costs of over **20% of GDP** (World Bank, UNICEF). CCAC data further identified **black carbon and methane** from household heating, coal plants, and transport as major drivers of both health impacts and climate change.
- KIIs and FGDs highlight that air pollution links to social inequalities, as marginalised groups often lack means to protect themselves or change fuel sources

6.2 Energy Poverty and Access to Clean Energy

- FGDs revealed widespread reliance on coal, wood, and even waste-burning for heating, particularly among low-income households, Roma households, and the elderly. Participants reported that rising energy costs force trade-offs between heating, food, and healthcare. While the Roma community, female-headed families, and elderly persons are indeed severely affected, energy poverty in BiH is a widespread challenge impacting both rural and urban populations across all ethnic groups. National data confirm that household heating is the primary driver of winter air pollution, including in Sarajevo Canton, where household heating is identified as the main source of fine particulate emissions. Consequently, policy responses should target the entire population facing energy poverty, not only specific groups.
- Desk review evidence showed that as of 2016, only **63% of the BiH population** had access to clean cooking technologies. Women, Roma, and rural households are most affected, with female-headed households facing higher energy poverty rates. UNDP and GESEP/ESAP analyses warn that without equity safeguards, energy transition policies (e.g., carbon pricing, vehicle standards) risk disproportionately burdening low-income groups.
- **Specific clean energy initiatives show mixed inclusiveness.** Energy-efficiency retrofit programmes in social housing and public buildings have been implemented, but KIIs and FGDs indicated that Roma households and female-headed families often cannot access them due to complex procedures or lack of information. District heating upgrades in urban centers have improved air quality for some populations, but high connection fees exclude low-income families. Renewable energy investments (solar and small hydro) are increasing, yet evidence of benefits for vulnerable groups remains limited.

6.3 Governance and Participation

- Primary data consistently revealed feelings of exclusion and distrust in governance processes. Women, Roma, youth, and persons with disabilities described climate consultations as symbolic and inaccessible. KIIs noted that decision-making is dominated by technical ministries with limited integration of gender or social perspectives.
- Desk review findings confirmed these concerns. BiH's NDC and draft NECP are largely gender-blind, with no systematic integration of gender analysis or disaggregated monitoring indicators. While ESAP 2030+ introduced GESI language into environmental policy, implementation is uneven. The **Gender and Climate Coalition** provides an emerging platform, but it lacks institutional influence.
- The **GAP BiH 2023–2027** further emphasizes the need for greater women's representation in leadership and stronger mainstreaming of gender into climate, energy, and environmental policies.

Decentralisation leads to fragmented responses and capacity gaps:

"It's decentralized… municipalities are overwhelmed with different projects. Many good guidelines stay on paper because institutions lack capacity."

6.4 Youth Exclusion and Potential

- Young people are among those most directly affected by pollution and climate shocks, facing disruptions to education during smog episodes and extreme events, as well as rising health risks.
- Despite strong engagement and concern for climate justice, youth lack structured institutional platforms, mentorship, and opportunities for civic engagement. This disconnect between progressive youth and risk-averse policymakers undermines the legitimacy and sustainability of climate governance.
- Roma youth, rural youth, and youth with disabilities face **compounded barriers**, including poverty, discrimination, and limited access to digital tools. Their exclusion perpetuates cycles of disempowerment.
- At the same time, youth represent a critical but untapped resource for innovation and leadership in clean energy, community resilience, and civic activism. Ensuring their meaningful participation would bring fresh perspectives and strengthen long-term climate governance.

Youth feel excluded from decision-making and lack platforms for meaningful participation.

"Young people are perceived as not senior enough, not knowledgeable enough… but they are tasked with dealing with pollution and climate disasters."

There is interest and activism, but structural barriers and mistrust in institutions persist.

6.5 Intersectional Vulnerabilities

- Vulnerabilities are not evenly distributed. Women experience greater exposure due to caregiving responsibilities and time spent in domestic spaces reliant on polluting fuels.

- Elderly persons face age-related health declines, increasing susceptibility to pollution-related illnesses. Roma and low-income communities often live in substandard housing near polluted areas, with limited access to healthcare or clean energy. Persons with disabilities encounter systemic barriers to accessing information, infrastructure, and emergency support.
- **Intersectional disadvantages (across gender, age, disability, income, and geography) compound exposure to climate and pollution risks while limiting resilience.** For example, elderly Roma women in informal settlements, rural single mothers, or youth with disabilities face layered vulnerabilities that are rarely captured in official policy or data systems.

6.6 Health and Migration Dynamics

- Communities reported that healthcare systems are unprepared for pollution peaks and that marginalised households often cannot access services. Families described considering relocation to escape polluted urban centers, highlighting how air pollution is shaping internal and external migration decisions.
- Desk review findings aligned with these perceptions, noting **over 30,000 COPD cases in 2021** and rising cardiovascular risks linked to air pollution. Health data is rarely disaggregated, masking differentiated impacts. Evidence from CCAC and UNDP suggests that reducing SLCPs could deliver immediate health co-benefits, but such opportunities are not yet fully embedded in BiH's health and climate policies.

7 Conclusions and Recommendations

7.1 Conclusions

This GESI study demonstrates that climate change and air pollution in BiH are not only environmental challenges but also urgent social justice concerns. Women, youth, Roma, elderly persons, persons with disabilities, and low-income households bear disproportionate burdens of poor air quality, energy poverty, and climate shocks, yet remain sidelined from the governance processes that could address their needs. These inequities are compounded by intersectionality: overlapping identities such as being Roma, elderly, disabled, or rural multiply vulnerabilities and intensify exclusion.

While **BiH has made formal commitments** through CEDAW, the Istanbul Convention, UNSCR 1325, and the Law on Gender Equality, as well as national strategies such as the NDC, NECP, and ESAP 2030+, the integration of gender and social inclusion into climate and energy policies remains weak. The GAP BiH 2023–2027 provides a national framework for advancing equality, but stronger

institutional coordination, enforcement, and accountability are required to translate commitments into practice. Without such integration, mitigation and adaptation measures risk reinforcing existing inequalities.

The findings of this study highlight that clean energy initiatives and air quality improvements often fail to reach the most marginalised groups. Retrofit programmes, district heating upgrades, and renewable energy investments, while beneficial in principle, are frequently inaccessible due to complex procedures, high costs, or a lack of outreach to vulnerable communities. Similarly, mitigation policies such as carbon pricing or fuel taxes may reduce emissions but risk creating regressive impacts if not coupled with equity safeguards. Conversely, well-designed policies (such as targeted subsidies, inclusive clean heating schemes, and investments in energy efficiency) have the potential to deliver both environmental and social benefits.

Youth represent a critical but yet underutilised constituency for climate action. Despite their demonstrated concern for climate justice, young people lack structured opportunities, mentorship, and institutional channels to influence policy. Youth in rural areas, youth with disabilities, and Roma youth face compounded disadvantages. Investing in youth participation (through climate councils, education, and youth-led initiatives) would not only strengthen inclusivity but also ensure long-term sustainability and innovation in climate governance.

The study also confirms the **urgent need for improved data.** Current monitoring systems rarely disaggregate by sex/gender, age, disability, leaving invisible the very groups most affected by air pollution and climate change. Strengthening data collection, analysis, and reporting is essential for evidence-based, equitable policymaking.

Ultimately, bridging the gap between policy and lived realities requires a deliberate and systematic embedding of GESI across all levels of climate and environmental governance. This means moving beyond symbolic participation to meaningful inclusion, aligning with national priorities under the GAP BiH 2023–2027, and ensuring that the transition to clean energy and improved air quality is just, equitable, and inclusive. By placing the voices of marginalised and vulnerable groups at the center of climate action, BiH can advance not only its environmental objectives but also its commitments to equality, resilience, and sustainable development. A just transition must place **economic justice, job retraining and equitable access to energy** at its core. Without these elements, decarbonisation could deepen inequality and social instability. The energy transition is therefore not only a matter of cutting emissions; it is equally a project of **social inclusion**, particularly for marginalised populations. By deliberately integrating these groups into emerging green sectors, BiH has the opportunity to **address long-standing inequities that earlier economic reforms left unresolved**.

The combined evidence demonstrates that air pollution and climate change in BiH generate severe health, economic, and social impacts, disproportionately affecting women, Roma, low-income households, elderly people, youth, persons

with disabilities, and informal workers. These impacts are closely linked to structural inequalities, where patriarchal norms, fragmented governance, and entrenched discrimination exacerbate exclusion. While national policies and international commitments exist, they remain fragmented, show limited integration of gender and social inclusion, and are inconsistently implemented. Weak monitoring and data systems further obscure the lived realities of vulnerable groups. At the same time, concrete barriers (such as the lack of clear guidelines for participation, inaccessible clean energy programmes, and weak institutional follow-up) undermine effective responses. Bridging the gap between policy and community realities requires the deliberate integration of GESI into climate, energy, and health frameworks, alongside inclusive platforms that empower those most affected and ensure accountability in implementation.

7.2 Recommendations

The recommendations emerging from this GESI study are grounded in the lived experiences of communities consulted through KIIs and FGDs and are reinforced by evidence from the desk review. Together, they call on state, entity, cantonal and municipal authorities, as well as the Agency for Gender Equality of BiH, local governments, civil-society organisations, academia and development partners to advance inclusive, equity-driven climate and environmental action in BiH.

7.2.1 Policy & Governance

- **Align with the GAP BiH 2023–2027.** Embed its priorities, women's participation in decision-making, economic empowerment of rural and Roma women, and GBV prevention into climate, energy, and air quality policies to advance both environmental and social objectives.
- **Mainstream GESI into climate and energy frameworks.** Ensure systematic integration of gender and social inclusion into all major frameworks (NDC, NECP, NAP, ESAP 2030+). Introduce gender-responsive budgeting, mandatory gender impact assessments, and disaggregated monitoring indicators.
- **Strengthen institutional coordination.** Establish inter-institutional mechanisms linking environment, energy, health, social protection, and education. Appoint GESI focal points across ministries and local government to ensure continuity and accountability.
- Assess the **distributional impacts** of economic instruments (such as subsidies, green incentives, carbon pricing, and fuel taxes) to ensure these measures do not have regressive effects. Policymakers should design mitigation policies with explicit safeguards so that low-income and marginalised households are not disproportionately burdened.
- Ensure the success of **local transition initiatives** through replicability, decentralisation of resources, and external support (EU, UN or other donors) that can bypass state-level bottlenecks. Remove regulatory and

administrative barriers to local innovation, enable municipalities to access state or donor funding directly, embed youth, women and marginalised groups as co-creators in transition strategies, and reform education to promote civic agency, practical skills and interdisciplinary thinking.

- **Strengthen and resource the Gender and Climate Coalition** by providing dedicated funding and staff positions, enabling it to run advocacy campaigns and participate in national and international climate fora. Build the Coalition's technical and organisational capacity through training on climate policy, GESI mainstreaming, and evidence-based advocacy. Establish a formal monitoring mechanism, for example, an annual scorecard or progress report, to track how many of the Coalition's recommendations are adopted by government institutions and to ensure feedback loops into policy processes.
- **Promote inclusive communication.** Ensure that information on programmes and consultations is accessible to persons with disabilities, minority-language speakers, and rural communities. Encourage news portals to provide audio content specifically designed for persons with visual impairments, ensuring that digital information platforms are inclusive.
- Align national climate and energy policies with the EU Green Agenda, the Bosnia and Herzegovina Gender Action Plan, and the European Just Transition Mechanisms.
- Establish **formal cooperation mechanisms** (such as permanent consultative platforms linking CSOs, local authorities and relevant institutions) with the mandatory inclusion of marginalised groups to ensure meaningful and continuous participation in climate and energy decision-making.

7.2.2 Inclusive Energy & Air Quality

- **Tackle energy poverty through inclusive programmes.** Expand access to clean and affordable heating via targeted subsidies, energy-efficiency retrofits in social and low-income housing, and simplified application procedures. Prioritise Roma settlements, rural communities, and female-headed households.
- **Ensure clean energy inclusiveness.** Evaluate and reform current retrofit programmes, district heating upgrades, and renewable investments to ensure they reach marginalised groups, removing financial and procedural barriers.
- **Harness short-lived climate pollutants reductions (methane, black carbon, HFC).** Implement stove and furnace replacement, district heating upgrades, and methane capture in agriculture and waste management, with safeguards to ensure affordability and equitable access.
- **Promote just transition and green jobs.** Develop and implement re-skilling, employment, and entrepreneurship programmes for women, youth, Roma, and marginalised groups in renewable energy and efficiency sectors. Require industries to adopt just transition plans with explicit GESI targets.

- Embed economic justice, job retraining, and equitable access to energy as central elements of the just transition. Without these, decarbonisation efforts risk deepening inequality and social instability. Integrating marginalised groups into emerging green sectors offers an opportunity to redress long-standing socio-economic inequities.
- **Safeguard distributional equity.** Apply a distributional lens to all mitigation policies. Ensure that carbon pricing, vehicle standards, and fuel taxes do not impose disproportionate burdens on low-income households. Pair with subsidies and support schemes for vulnerable groups.
- **Address energy poverty** and expand inclusive access to health and social protection services as a core pillar of the green transition. Ensuring vulnerable groups can participate in and benefit from a just transition requires simultaneous investments in energy access and in equitable health and social protection systems.

7.2.3 Youth Participation

- **Create formal mechanisms for youth engagement.** Establish youth climate councils or hubs at municipal and national levels to provide structured participation in decision-making. Strengthen the digital and technological dimension of youth engagement, support initiatives using digital sensors and start-up ecosystems to position youth as innovators in climate action.
- **Support youth-led initiatives.** Launch mentorship schemes, fellowships, and micro-grants to fund youth-driven climate, energy, and resilience projects.
- **Embed climate education.** Integrate climate and civic engagement modules into school curricula to prepare youth for future leadership roles.
- **Build regional and global connections.** Facilitate exchanges linking BiH youth with regional and international climate movements and innovation hubs. Promote regional youth exchanges and joint student initiatives to break stereotypes, build reconciliation, and foster regional cooperation on climate and energy issues.

7.2.4 Intersectionality and Data

- **Address layered vulnerabilities.** Tailor programmes and policies to the needs of groups facing multiple disadvantages (e.g., elderly Roma women, rural single mothers, youth with disabilities) by ensuring intersectional analysis in all policy design.
- **Ensure anti-poverty and social protection measures** target all groups experiencing structural poverty. Expand support to rural poor, unemployed youth, elderly persons, and persons with disabilities, to capture the full scope of socio-economic vulnerability in BiH.
- **Strengthen data systems.** Collect and publish disaggregated data (sex, age, disability, ethnicity, geography) across climate, energy, health, and social

indicators. Develop intersectional monitoring frameworks to capture outcomes for marginalised groups.

- Establish a **national database** disaggregated by sex/gender, age, disability and to systematically monitor climate, energy, and health indicators. A dedicated sub-chapter or policy action on "Systematic Data Collection and Monitoring" should be developed to strengthen evidence-based policymaking.

7.2.5 Health & Protection

- **Expand health system preparedness.** Strengthen healthcare capacity to respond to pollution peaks and climate-related health risks. Ensure equitable access to healthcare for marginalised groups.
- **Reform structural inequalities.** Promote reforms to secure women's land and property rights, expand credit access for women and marginalised groups, and remove discriminatory inheritance practices.
- **Invest in public awareness.** Launch campaigns on the health risks of air pollution and benefits of clean energy, using storytelling from women, Roma youth, and elderly people to humanize climate impacts and promote inclusive responses. Incorporate **concrete case studies** (such as life stories of elderly Roma women or rural single mothers) to give a human dimension and strengthen the advocacy value of the report. Highlight inspiring community actions (for example, the women of Kruščica resisting hydropower projects) through youth-centred media campaigns and create mechanisms to recognise and appreciate youth participation.
- Integrate a **GESI perspective into public health systems**, including strengthening the capacity of health centres during smog seasons and creating "health–climate protocols" that link pollution alerts to health service preparedness.

These recommendations demonstrate that climate action in BiH must go beyond technical solutions to address deep-rooted inequalities. Embedding GESI across frameworks, safeguarding vulnerable groups in the energy transition, and creating platforms for participation will ensure that those most affected by climate and air pollution are central to decision-making, and that BiH's climate transition is just, equitable, and sustainable.

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