



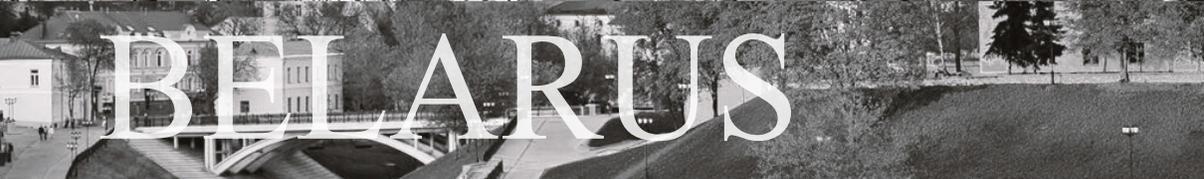
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Green Transition in Eastern Partnership

Under the framework of European Green Deal and the lessons
from the Western Balkans

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Green Transition in Eastern Partnership – under the framework of European Green Deal and the lessons of the Western Balkans

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Abstract

The urgency for a Green Transition (GT) has become a global imperative. Europe, recognizing this importance, adopted the European Green Deal (EGD) with an ultimate goal to reach climate-neutrality. However, given the ambitious and the scale of the initiative, independent efforts are insufficient, thus, engaging partners becomes crucial. Academic and scientific discourse have investigated the GT across the EU and neighboring countries, yet, the knowledge and potential of the EaP (Eastern Partnership) in this process remains relatively underexplored.

The research aim is to investigate how the EaP can exchange knowledge, resources, and practices to support the transition, as well as to identify key drivers and barriers that impact the process. For this, EaP nations need to prepare themselves to address climate issues as part of a wider partnership of shared responsibilities. In light of this, the thesis explores the WB experience of GT, which although not EU members, have initiated their own Agenda and possess a similar contextual history to EaP. The study primarily relies on a mix of desk research, semi-structured interviews, quantitative analysis and comparative frameworks.

However, there are complexities that could impede the region's transition. Among them, the highest risks are associated with diverse political alignments regarding EU integration, tensions with neighboring states, weak institutional capacities and governance models, outdated infrastructure, dependency on traditional industries, data scarcity, weak monitoring, and financial constraints. In order to eliminate those factors, the thesis aims to design a generalized GT roadmap and incorporate tailored points for the EaP context.

Research concludes that the framework's applicability must be adjusted to the unique regional specificities of EaP, it should have a flexible nature that will reflect the distinct political aspirations of member states; Moreover, it's important to design a group for regional cooperation, create unified databases for improving data quality and consistency for monitoring processes, identify policy gaps, integrate cross-sectoral fields, establish partnerships and twinning programs with local and international organizations for receiving technical and capacity support, diversify financial investment plans, build local capacities, promote co-ownership initiatives for gaining public trust and, reinforce monitoring systems. This adaptive approach will enable the EaP countries to overcome the complexities of their regional dynamics and achieve tangible progress towards their GT goals.

Keywords: *Green Transition, European Green Deal, Eastern Partnership, Western Balkans, Green Transition Roadmap, Carbon Neutrality*

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It is my hope that researchers and policymakers will find the study useful to build the future steps upon it.

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The List of Acronyms

EaP – Eastern Partnership

ENI - European Neighbourhood Instrument

EEA - European Environment Agency

EGD – European Green Deal

EU – European Union

GAWB - Green Agenda for the Western Balkans

GHG - Green House Gas

GT – Green Transition

IPA - Instrument for Pre-accession Assistance

IPCC - Intergovernmental Panel on Climate Change

JGT – Just Green Transition

JTM – Just Transition Mechanism

RCC – Regional Cooperation Council

SDG - Sustainable Development Goals

WB – Western Balkans

WHO - World Health Organization

WMO - World Meteorological Organization

Introduction

1. Expanding the Green Deal – a Focus on EaP

The green transition has become a global imperative as the world faces with the challenges of climate change (Romanello M., 2021). Europe, being at the forefront of sustainable development efforts, has recognized the importance of transitioning towards more sustainable practices and in 2019, with an ultimate goal to reach climate-neutrality, adopted the EGD (European Council, 2019). Nevertheless, Europe's independent efforts alone cannot bring about the ambitious goal of the initiative, given the complex nature of climate change. Therefore, engaging neighboring countries and partners, attracting them to take a sustainable path and contribute to the EU's collective objectives, is important. This thesis focuses on the EaP¹, a strategic framework established by the EU, as the knowledge around and its role in the shift towards sustainability still remains relatively unexplored. The research aims to assess the current state of the green transition in the EaP, investigate the environmental landscape, policy frameworks, institutional capacities and challenges to uncover potential pathways and opportunities for sustainable development in the region and examine their role in Europe's climate-neutrality goal. Ultimately, by processing insights from the experience of the WB² partnership, identify areas where the EaP can improve its contribution and increase the regional cooperation.

For addressing objectives, the thesis is structured into five chapters; The first chapter examines climate change in Europe, explores the EGD, and discusses its implications for candidate and neighboring countries. The second chapter provides the

1 Joint initiative involving - the EU member states and six Eastern European partner countries: Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Ukraine

2 Consisting of Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia

WB overview and highlights challenges and capacities for the GT. The 3rd chapter preceeds with the EaP countries and analyzes their progress in adopting green policies. The 4th chapter undertakes a comparative analysis between the WB and the EaP. Ultimately, chapter five identifies best practices and challenges in the WB and synthesizes findings for the green transition within the EaP.

2. Background

Europe has progressed in sustainability and maintained a strong track in reducing GHG emissions (European Commission, 2019). Despite that, none of the countries are on track to meet the Sustainable Development Goals (SDGs) by 2030. According to the latest SDG Report 2023 (United Nations, 2023), half of the targets are moderately or significantly off track, while nearly one-third have shown no progress or have regressed since 2015. The weak progress is an universal issue, yet the developing countries are suffering the most from this shortcomings.

In light of this, the EGD has emerged as a pivotal initiative, designed to led Europe towards climate neutrality by 2050. It serves as a cornerstone for the EU's strategy to simultaneously achieve SDGs and fulfill the objectives of the Paris Agreement. Nonetheless, the aspirations of the EGD cannot be realized through Europe's independent efforts, given that the root causes of climate change transcend national boundaries. Therefore, Green Transition (GT) requires collective efforts and regional cooperation. The research sets focus on the EaP countries, including Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine. Given their geographical proximity, evolving political and economic dynamics, this group holds potential for contributing to the wider GT. However, they face challenges such as increased vulnerability to climate change, weak institutional and governance capacities, inefficient resource management, technological gaps, political instability, economic constraints, and so on.

As the EaP countries move closer to acquiring EU candidate status, strong governance structures will become more relevant by the time. These frameworks must tackle climate challenges both domestically and within the broader context of the EU. The EaP nations need to prepare themselves to address climate issues not only internally but also as part of a wider partnership of shared benefits and responsibilities. In light of this, the WB experience of GT could be highly relevant to the EAP. The WB countries, though not EU members, have gained EU candidate status and initiated their own Agenda, which demonstrates their readiness to adhere to EU environmental standards and make relevant contributions to the regional level. The WB lessons could help in shaping strategies in EaP and make them ready for the future environmental and policy challenges.

3. Research Problem

Although the EU countries have progressed in adopting green practices and policies to mitigate environmental impacts, challenges persist in achieving climate-neutrality (SDSN, IEEP, 2019). Numerous academic literature, scientific researches and projections have investigated the current state of the GT across the EU and neighboring countries; Including annual reports of the IPCC, EEA, Copernicus projections, WMO observations, as well as agendas focusing on regions, such as WB (GAWB), Mediterranean (Mediterranean Strategy for SD), and Nordics (Nordic Green); Nevertheless, the knowledge and potentials of the EaP in the green transition remains relatively unexplored. It is important to investigate how they can facilitate exchange of knowledge, resources, and practices, as well as improve governance, policy coordination and capacity building to support the transition process within the region.

4. Rationale: Research aims, Objectives, Questions

The aim of the research is to investigate the pathway towards climate neutrality in EaP by analysing the influence of EU green policies and the WB journey. Looking at the current environmental landscape, policy frameworks, and institutional capacities, this research intends to shed light on the potential pathways and opportunities for carbon neutrality in the region; as well as to identify key drivers and barriers that impact the adoption of green practices and explore the role of the EU in supporting transition process. Moreover, while processing insights from the experience of the WB, the research steers to identify key areas where the EaP can improve its GT path, inform policy interventions, and promote regional cooperation. In order to address the aforementioned objectives, following research questions needs to be investigated:

- What's the current state of environmental policy frameworks & initiatives within the EaP countries and how does it impact their potential for climate neutrality?
- What are the major environmental and socio-economic challenges facing EaP countries and how do they impact the GT process?
- How does the EU support the GT in the EaP and what additional measures could strengthen this support?
- What lessons from the WB experience can be applied to the EaP context to enhance its GT path?
- Considering regional specificities, what are the potential future pathways for improving the GT framework within the EaP?

5. Scope and Significance

The focus of the study is given to the GT within the EaP under the framework of EGD. It examines the current state, drivers and barriers to green practices, and leverages the WB experience. However, the research does not include an in-depth analysis of individual EaP member states or WB. By addressing the current research gap, this thesis aims to contribute to the existing knowledge on the GT in EaP. Findings will inform policymakers, international organizations, and relevant stakeholders engaged in this field, about the current state of the GT and the EaP's potential. Additionally, this study aims to support evidence-based decision-making and policy interventions to accelerate the transition process.

6. Limitations

While providing different perspectives, it is important to acknowledge the potential limitations that may impact findings of the study. It should be considered that the analysis relies on the availability and reliability of data. There may be limitations in accessing up-to-date data, particularly for Ukraine due to the recent ongoing war. This could potentially restrict the scope and depth of the analysis, leading to incomplete or biased conclusions. Moreover, findings primarily reflect the specific context of the EaP. While the GT is a context-dependent process, and the challenges and opportunities identified may not be directly transferable to other regions or countries. Therefore, attention should be paid when generalizing the findings beyond the studied context.

Another important factor is the dynamic nature of the GT and transitional economy countries, which are influenced by policy changes, external politics, technological changes, and socio-economic shifts. This research represents a snapshot at a particular point in time, and findings may not fully capture the future developments. Therefore it is important to consider the broader global dynamics that may impact processes, interpret findings and build further studies upon them.

7. Thesis Outline

This thesis is divided into five chapters that sequentially address the key aspects. The first chapter sets the stage by examining climate change in Europe and its environmental challenges. It also explores the EGD, its evolution, objectives, key policies, and financing tools. The chapter investigates the implications of the EGD for the candidate and neighboring countries, alignment with EU standards and funding

opportunities.

The second chapter presents an overview of the WB's political, geographical, and socio-economic context, emphasizing the challenges and capacities for the GT. It explores the emergence of the green agenda for the region, and assesses implementation challenges and progress.

In chapter three, the focus shifts to the political, geographical, and socio-economic context of the EaP countries. It explores the localized and the shared environmental issues with the EU and examines challenges and capacities for the green transition. The chapter also investigates the progress of adopting and implementing green policies in the Partnership and analyzes the alignment with the EU agenda.

Chapter four provides a comparative framework of the WB and EaP countries, highlights key differences in terms of regional context, socio-economic factors, and policy frameworks. Ultimately, chapter five focuses on identifying best practices from the green transition initiatives in the WB and their applicability in the EaP. It synthesizes findings and presents policy recommendations for green transition within the partnership.

8. Research Methodology

This section elaborates on the research methodologies chosen to address specific objectives and questions posed in five core chapters. The study primarily relies on a mix of desk research, semi-structured interviews, quantitative analysis and comparative frameworks.

The initial phase of the research context focuses on secondary data, examining documents that shed light on climate change within the EU, establishment of the EGD, and its broader implications. The methodology for exploring climate change in EU integrates an analysis grounded in data from the Copernicus Climate Change Service (2021 and 2022), supplemented by the World Meteorological Organization (WMO) for current environmental trends, and the Joint Research Centre's (JRC) technical reports on global warming impacts within the EU. Additionally, recent IPCC and EEA reports (2022-2023) provided a detailed examination of specific environmental threats.

Moreover, review of European Commission documents and scholarly articles spanning from 2019 to 2023 enriched the understanding of the EGD's development, objectives, and initiatives. The exploration of the EGD's influence on the WB and neighboring countries, including their alignment with EU environmental standards and the socio-economic impacts of green transition efforts, utilized a combination of scholarly articles and EU policy documents. Notable contributions from researchers such as Svea Koch (2021) and analysis of EU External Action plan documents (2020, 2021) were important. Review of national documents and reports, such as European

Commission and Parliament reports (2019-2023), enabled a better analysis of policy diffusion and adoption across the EaP countries. This approach was further enriched by reviewing the ENP, Enlargement Negotiations documents (2019-2023), 'EU4 Climate' and 'EU4Environment' to assess the recent EU-funded initiatives in the EaP.

Transitioning to the second step, focused on the WB, a mixed-method approach is adopted to explore the region's environmental legacy, policy development and the Green Agenda's implementation. To evaluate the developmental stages and environmental landscape in the WB, the desk research method was used, drawn from scholarly articles by Dunay (2023) and Jano (2008), chosen for their focused work on structuring the developmental stages of the WB. These stages were important in mapping out associated environmental challenges. Additionally, reports from the Regional Cooperation Council (2020), the European Environment Agency (EEA), and the United Nations Development Programme (UNDP) from 2012 and 2021 offered insights into the bigger environmental picture. The scarcity of data necessitated a review of national reports, such as those from the Republic of Albania Ministry of Environment, Forestry and Water Administration (2009) and Climate ADAPT (2016), among others by Bachev (2023), to construct a detailed picture of environmental challenges and capacities for the green transition.

The exploration of the Green Agenda's emergence, implementation challenges and financing mechanisms, used documents and reports from the Regional Cooperation Council, European Parliament and Council (2023), and Commission Staff's working documents (2020, 2021, 2023). A diagrammatic representation was developed to consolidate information on financing tools, extracted mainly from Commission staff documents and related reports, to systematically analyze the financial underpinnings supporting the Green Agenda.

To get familiar with the implementation challenges and the progress of the Green Agenda, interviews were conducted with experts from research institutions like GreenForce, Co-Plan, and NordRegio, as well as independent experts with specific knowledge on the green transition processes in the WB. A 15-minute questionnaire comprising 6 closed and 14 open questions was utilized, later reported in aggregate form, ensuring the confidentiality of responses. This approach provided context-specific insights unattainable through document analysis alone, given the relative novelty of the Green Transition in the WB and the limited availability of implementation reports.

The methodology for the third stage on the EaP engages with scholarly articles, particularly those authored by regional academics, and secondary data analysis from the World Bank. This dual approach aims to capture the socio-economic development dynamics and environmental contexts within the EaP countries. To assess their political, socio-economic and development trajectories, the study engaged with scholarly articles from local experts such as Panossian (2016), Coppola (2017), Shougarian (2019), Gogishvili (2018), and Mantchev (2016). These selections were predicated on the scholars' focus on local challenges and development stages,

providing unique insights into the regional context. Complementary to this, World Bank data spanning the last 30 years was utilized to trace GDP progress and align it with recent developmental milestones, offering a quantitative backdrop to the qualitative insights provided by the scholars.

For assessing the environmental landscape, given the gap in local monitoring capabilities, official reports from EU4Environment (2021, 2022), the World Health Organization (WHO) (2015, 2022), and the Organisation for Economic Co-operation and Development (OECD) (2022) were used. Additionally, World Bank data from 2021 facilitated a comparative analysis of the EaP's GHG emissions, contrasting them with those of the EU-27 to highlight their environmental impact relative to its economic output. Moreover, exploring the green transition required a review of EU Commission documents such as '20 Deliverables for 2020' (2020) and 'A New Agenda Beyond 2020' (2020), complemented by scholarly articles on policy tools and practices from authors like Tsebenko and Moldpres (2023). For an examination of financing mechanisms, similar to the WB a diagrammatic representation was developed to categorize the available tools, primarily drawn on information from European Commission documents (2022). This approach underscored similarities and divergences in financing strategies between the EaP and WB.

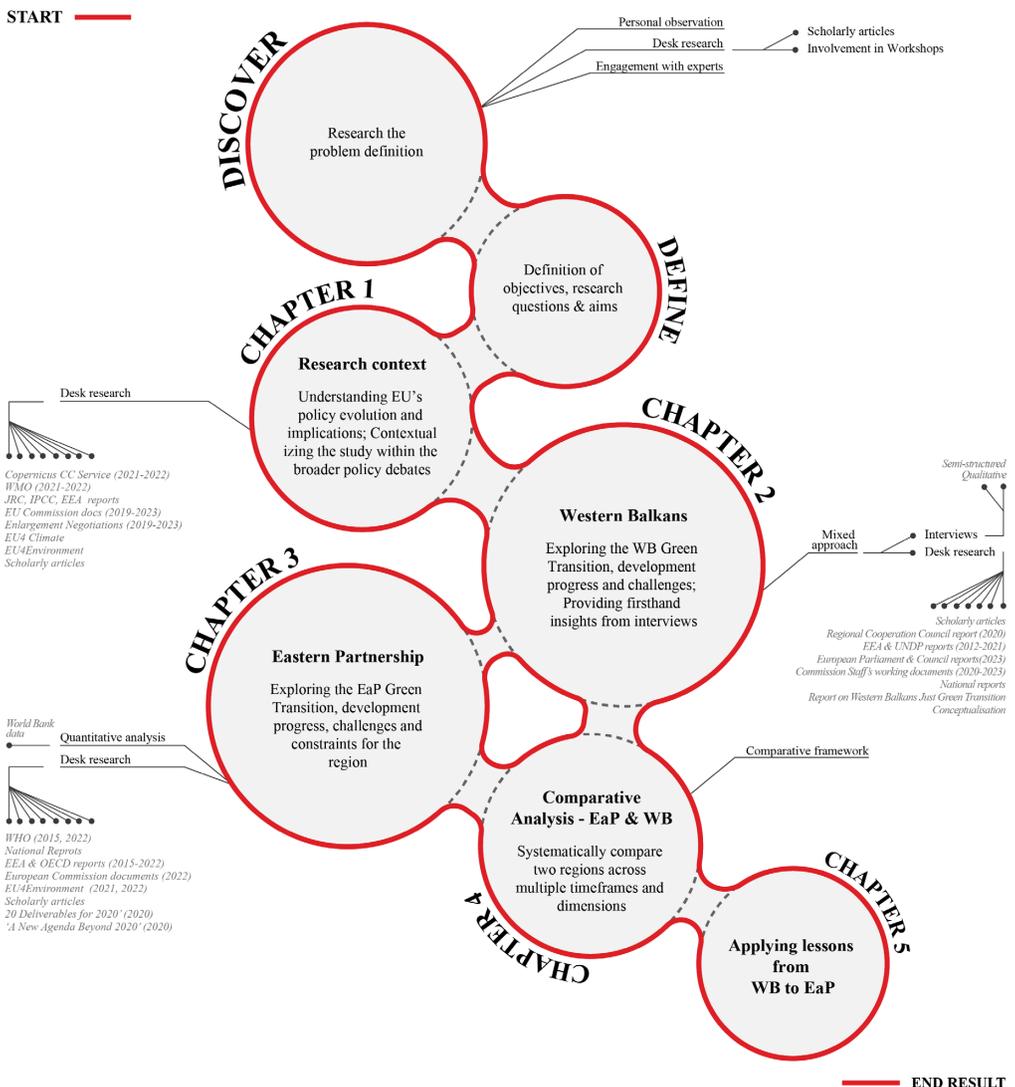
Furthermore, to address the environmental, administrative, technological, and capacity constraints impacting the green transition, the review of recent national reports from EaP countries was undertaken. These national reports were selected for their uniformity in indicators and metrics, simplifying the comparative analysis across the countries. This methodical examination allowed for the identification of common challenges and constraints faced by EaP countries.

The fourth step delineates a methodological approach designed to systematically compare and contrast the two regions across multiple dimensions. This method integrates syntheses of data and insights gained from the second and the third chapter. The framework targets key analytical dimensions including regional socio-economic contexts, environmental challenges, policy frameworks and priorities, financial mechanisms, and institutional capacities for green governance. The construction of interconnected timelines for the EaP and WB is complemented by a unified timeline that delineates shared and unique developments. This temporal analysis aids in pinpointing periods where paths diverged or aligned, providing a basis for understanding each region's unique journey. A key outcome from this comparative analysis is the assessment of knowledge and policy measure transferability between the WB and EaP. By identifying similarities in challenges and policy responses, as well as differences due to unique regional contexts, the study evaluates the feasibility of adopting successful strategies across regions. This aspect of the analysis is important for understanding the conditions under which certain initiatives could be successfully replicated or adapted.

The last phase's methodology integrates analysis of the GAWB action and moni-

toring plans with insights from expert interviews. The focus is on extracting governance mechanisms, implementation strategies, and their congruence with the EGD to understand the WB’s approach. The integration of expert perspectives provides depth, particularly on challenges and recommendations for improving the green transition efforts.

Research methodologies & Sequences



01

THE RESEARCH CONTEXT

OVERVIEW

The chapter explores the climate change in Europe, detailing the environmental challenges and the shift towards green transition through the EGD. In this respect, it is organized to provide an understanding of Europe's environmental scenario that would be the basis for further analysis of the GT in the EaP and lessons from the WB. It begins with a look at the main environmental challenges and trends affecting Europe (including extreme temperatures, droughts, floods, wildfires, and sea level rise). Following this, the chapter overviews the development, adoption, and objectives of the EGD, highlights key policies, initiatives, and financing tools developed to attain the objectives to transition towards a more climate-resilient future. The chapter elaborates on the implications for countries beyond the EU, particularly focusing on the influence of the EGD on candidate countries in the WB and neighboring countries in the EaP. Through analysis and review of policy documents, scholarly articles, and official statements, this chapter sets the stage for understanding the role of the EGD in shaping Europe's environmental policy and its broader spillovers on neighboring regions.

NAVIGATION THROUGH THE CHAPTER

1.1

*Climate
change in
Europe*

1.2

*From Sustainable
Development to
Green Transition –
The EU Green Deal*

1.3

*Implication
for countries
beyond the EU*

Climate Change in Europe

SECTION 1.1

Climate change, as a pressing global challenge, has been the subject of academic and scientific examination for several decades. Impacts of global warming and climate change on the environment, society, and the economy are significant, and the urgency to mitigate and adapt intensifies with every passing year. Europe is already facing impacts of climate change, with extreme weather events, rising sea levels, and increasing temperatures becoming more frequent and severe. As one of the principal contributors to global greenhouse gas emissions, Europe assumes an important role in the collective effort to mitigate climate change. However, should be emphasized that climate change related environmental hazards are only one part of the discussion, as while referring to climate neutrality, we mainly discuss CO₂ reduction and decarbonization.

This section aims to provide an understanding of the current state of climate change in Europe by reviewing contemporary academic research and encompasses topics such as underlying drivers, impacts, and simulation scenarios of climate change in the region. Ultimately, it serves as an introduction to the larger body of research.

1.1.1 Main environmental challenges and trends

Temperatures over EU have warmed over the 1991–2021 period, at an average rate of about +0.5 °C per decade. In 2021, EU's (Copernicus Climate Change Service, n.d.) released a report related to the European State of the Climate. Latest data show that 2021 was the fifth warmest year globally with the annual average global temperature being 0.3°C above to 1991–2020 period. Exceptionally high temperatures and heatwaves lead to scombination of droughts and high temperatures, that have fueled wildfires, with recorded annual burned areas. Extreme weather patterns have also damaged the agricultural sectors and rise the social vulnerability, as evidenced by the loss of hundreds of lives, direct impacts on approximately 510,000 individuals, and economic damages surpassing 50\$ billion (Copernicus, n.d.). According to the Atlas of Mortality and Economic Losses from Weather, Climate, and Water Extremes (World

Meteorological Organization (WMO), 2014), an analysis spanning from 1970-2019, Europe has witnessed increased human fatalities and economic losses. These disasters are predominantly attributed to extreme temperature, drought, flood, wildfire, and storms.

1.1.1.1 Extreme temperature

A long-term warming of surface air temperatures lead to the sharp rise of the average temperature over the past 4 decades. This trend has positioned the EU as the leading continent in warming; In the last five years alone, the average temperature in EU has increased by 2°C more than pre-industrial levels, surpassing the corresponding global increase (copernicus climate change service, 2022). Human-induced climate change caused an increase of the surface air temperature and severe heat waves, which already has impacts on human and natural systems, affecting health, agriculture, energy demand, and the growth cycles in natural environments.

Extreme temperatures are projected to intensify with climate change. According to the projections of the JRC technical report of 'Global warming and human impacts of heat and cold extremes in the EU', number of EU citizens exposed to heatwaves will grow from 10 million/year to 300 million/year in a scenario with 3°C global average warming by the end of 21th century. This will result in 96,000 fatalities/year from extreme heat, compared to 2,750 annual deaths at present. Curbing global warming to 1.5°C would limit mortality from extreme heat to around 30,000 fatalities/year (Gustavo, et al., 2020).

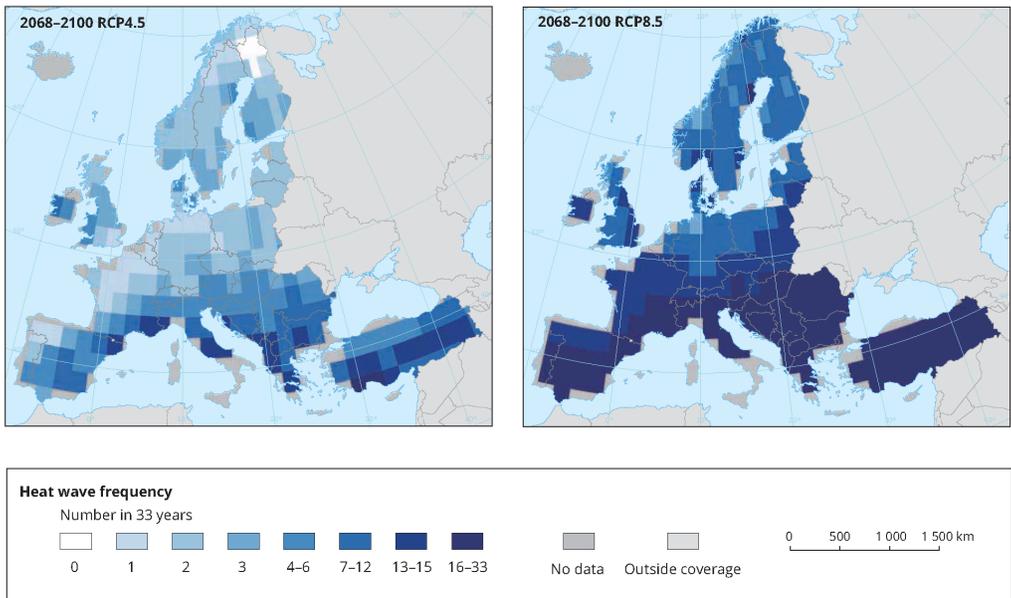


Figure 1: Extreme heat waves under two emission scenarios

Notes: RCP 4.5 corresponds to a medium-emissions scenario, whereas RCP 8.5 refers to a high-emissions scenario.

Source: EA (2019), adapted from Russo et al. (2014).

1.1.1.2 Drought

Anthropogenic warming is predicted to increase soil moisture drought in the near future. Warming-induced droughts, rising atmospheric CO2 concentrations and changes in precipitation patterns most critically, are affecting agricultural systems and impact the quantity, quality and stability of food production and water availability. According (EEA, 2019) Report, climate extremes are already influencing crop yields, livestock productivity and availability of water needed for irrigation.

Projected changes in the frequency of meteorological droughts for two emissions scenarios are revealing that droughts' frequency, duration and severity are expected to increase for the EU (Figure 2). The largest increase is projected for the south part. Based on the UFZ scientists, rising global warming by 3°C will expand EU drought regions by 13-26%. This increase, compared to the 1.5°C Paris target, will enlarge the drought area by 40% (±24%). If efforts are successful in limiting warming to 1.5°C, the drought regions can be limited to 19%. In the absence of effective mitigation mechanisms, EU will face new challenges for adaptation (L. Thober, S. Kumar, 2018).

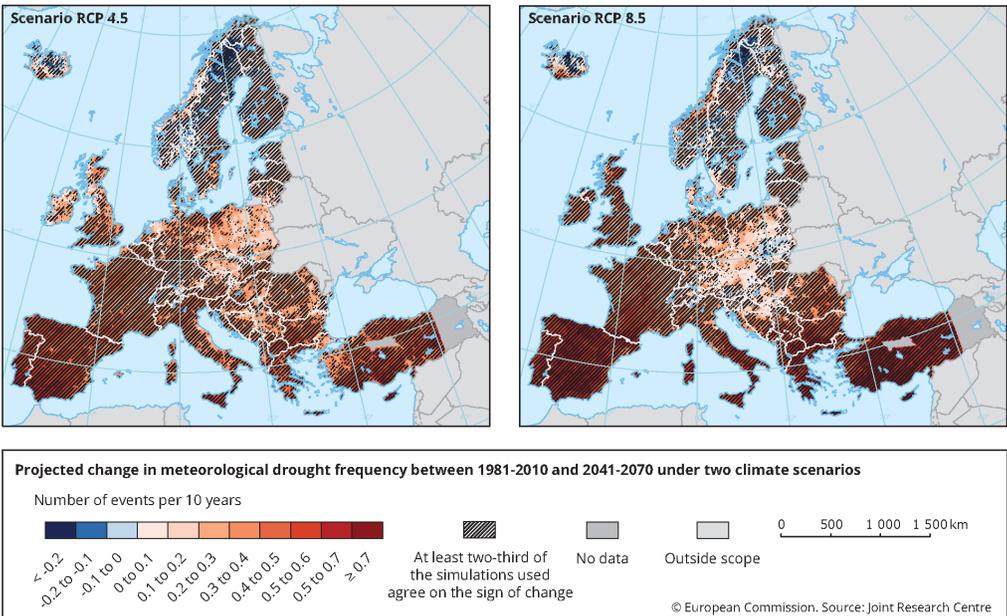


Figure 2: Projected changes in the frequency of meteorological droughts for two emissions scenarios

Notes: projected changes in drought frequency corresponds to the number of events per decade; by mid-century (2041-2070 relative to 1981-2010) for two different emissions scenarios.

Source: Adapted from Spinoni et al. (2018). Open access under CC BY 4.0.

1.1.1.3 Floods

Global warming is expected to lead to a higher intensity of precipitation and longer dry periods, that will increase the flash floods in EU. According to high emission projections by the EEA, northern and eastern parts could experience a potential increase of up to 35% in the occurrence of heavy rain during both winter and summer, within the timeframe of 2071-2100, compared to the reference period 1971-2000 (Figure 3). Sea level rise is driving up the risks of extreme flooding especially for people residing in the low-lying areas of Northern Europe (Jacob, 2013).

According to the (IPCC, 2022) report, warming beyond 1.5 degrees will make floods an annual problem for about 5 million Europeans. Reaching warming to 3°C by the end of the century will hit nearly half a million people exposed by annual river floods and will sixfold the damage from €7.8 billion a year today.

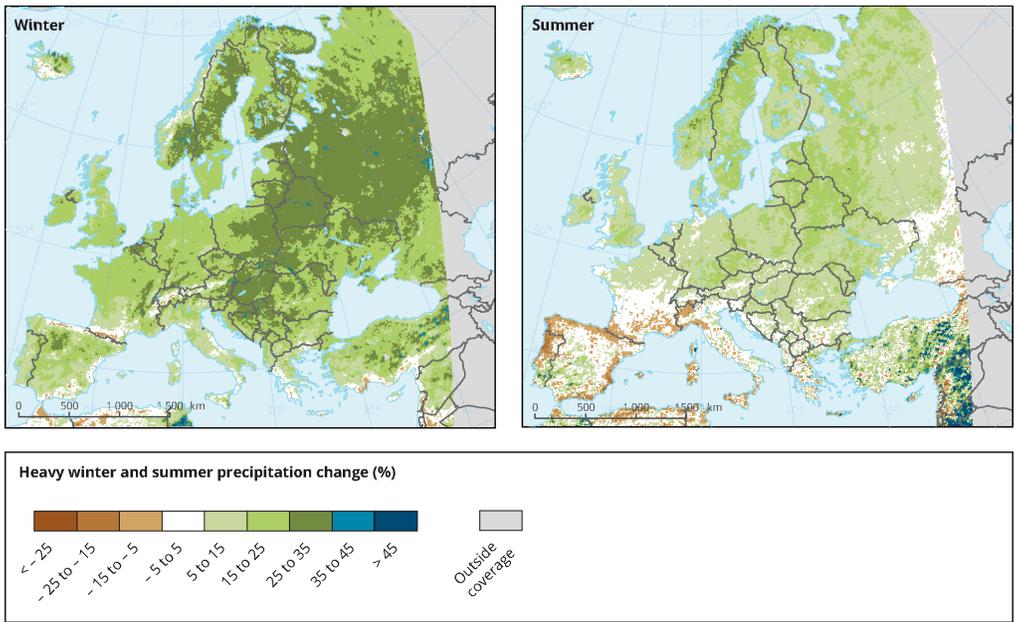


Figure 3: Projected changes in heavy precipitation (in %)

Notes: Projected changes in winter & summer from 1971-2000 to 2071-2100 for the RCP8.5 scenario based on the ensemble mean of different regional climate models (RCMs) nested in different general circulation models (GCMs).

Source: European Environment Agency

1.1.1.4 Wildfire

“The combination of a historical drought and heat waves during the summer has created unprecedented stress on vegetation and forests across Europe. With this series of reports, we are observing a worrying trend in recent years, for which climate change is certainly one of the main causes” (Gabriel, 2022).

According to the (Commission’s Joint Research Centre (JRC), 2022) European Forest Fire report, three of the worst fire seasons in the last six years, affected several non-prevalent regions in northern and western EU. Among them, 2021’s fire season was the second worst in the in terms of burnt area. Wildfires severely affected more than 1,000 km² of EU’s Natura 2000 protected sites, that account for 20% of the total area.

Projected changes in meteorological forest fire danger by the late 21st century for two emissions scenarios, compared with the period 1981-2010 (Figure 4) are showing more severe fire weather and expansion of the fire-prone areas. Based on the Canadian Fire Weather Index, fire danger increase is expected to be higher in western-central part, whilst the highest danger is situated in southern EU.

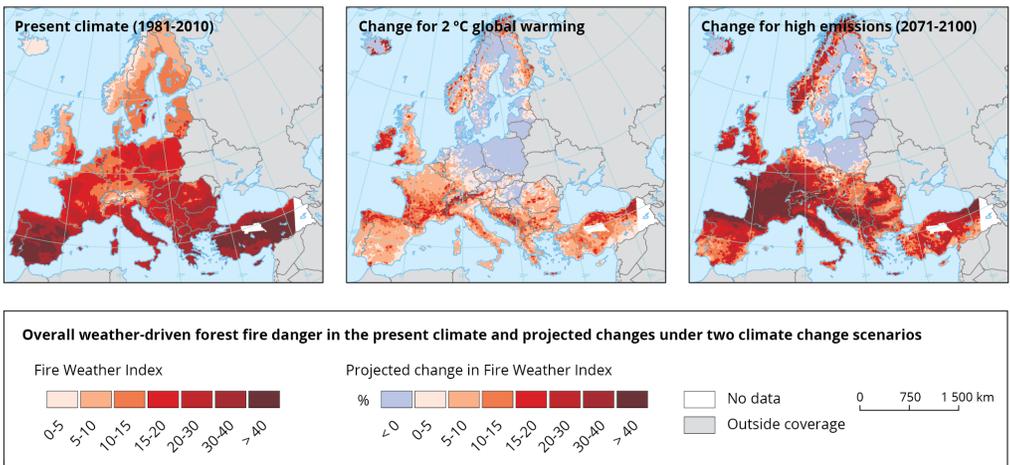


Figure 4: Forest fire danger for present and under two emission scenarios

Notes: climate change assessment of the Fire Weather Index (FWI) daily data from 1980 to 2100 for two scenarios (2°C global warming and RCP8.5 high emissions scenario).

Source: European Environment Agency

1.1.1.5 Sea level rise

Climate change is the main driver of the sea level rise in coastal flood losses. The EU coastal regions have already witnessed an absolute sea level increase, with most of

them experiencing an increase in sea level relative to land. Depending on the emissions scenarios (Figure 5), the frequency of coastal flooding is expected to increase by more than 10-100 in several regions by the end of the century.

According to the (IPCC, 2022) report, under a low-emissions scenario, the projected sea level rise falls within the range of 0.29-0.59 meters, while for a high-emissions scenario, it ranges from 0.61-1.10 meters. Assessments indicate that the upper limit for global mean sea level rise during the 21st century is estimated to be between 1.5-2.5 meters. In the absence of interventions, (European Environmental Agency, n.d.) annual losses from coastal flooding could surge from 1 billion EUR in 2030 to 31 billion EUR by 2100, assuming a high emissions scenario. The number of people exposed to coastal flooding is anticipated to increase from 102,000 to 1.52-3.65 million over the time (Vousdoukas M.I., 2018).

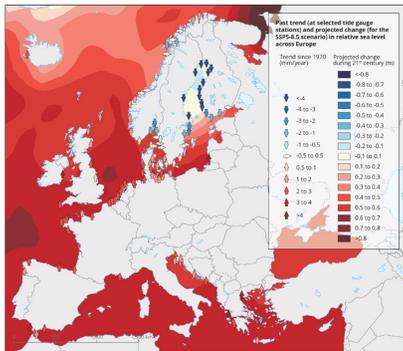


Figure 5: Projected change in relative sea level for two emissions scenarios

Notes: Past trend and projected change in relative sea level across Europe for two emissions scenarios, compared with the period 1981-2010.

Source: EEA indicator Global and European sea-level rise

Summary

Climate change will result in multidimensional and irreversible impacts on the ecosystems, economic sectors, health and well-being of present and future generations. In EU, these effects are already manifesting in the form of extreme weather conditions and climate-related hazards, which are projected to increase in frequency and intensity in most regions. Studies and projections for two emissions scenarios are stating that limiting warming beyond 1.5 degrees would help to limit effects of climate change and to adapt to new scenarios. Minimizing warming-induced risks requires targeted actions to reduce GHG emissions. It is important that EU countries have contributed around 17% of global cumulative GHG emissions from 1950 to 2012 (Romanello M., 2021). As one of the largest historical and current contributors to emissions, coupled with its role as a key provider of financing for climate change mitigation and adaptation, EU's response to climate change is of utmost importance for both humans and the well-being of the planet.

From Sustainable Development to Green Transition - the EU Green Deal

SECTION 1.2

1.2.1 Redefining Europe's Climate Strategy

Considering the historical patterns of Europe's contribution to the rise in global-mean temperature, empirical data position the region as a key emitter of cumulative greenhouse gas (GHG) emissions with 17% (Marcia Rocha, 2015). The consequences of anthropogenic GHG emissions resulted in climate change and already manifested in EU through adverse effects. Scholarly research advocates the importance of limiting the increase of average surface temperature to below the 1.5°C, which will enable the EU to mitigate major environmental challenges and their consequences, such as limiting human mortality from extreme heat and flooding, maintaining livestock productivity and availability, and preventing expansion of the fire-prone areas. Thus, fixing the threshold will empower the region to improve preparedness for forthcoming climate challenges and reinforce the social and environmental resilience.

With an ultimate goal to keep the world globally, and Europe, at crossing the 1.5°C threshold, a legally binding international treaty emerged in Paris, France, in 2015. The *Paris Agreement* was adopted at the (UN Climate Change, n.d.) conference (COP21) pursues “to limit the temperature increase to 1.5°C above pre-industrial levels. Although EU states ratified the agreement and made a commitment to its implementation, “The Paris Agreement is not enough” says CFR's Hill. In order to pursue the major goal set by the agreement, in December 2019, the EU Commission, working with the European Parliament and the Council launched the EGD. Under this initiative, EU member countries are committed to achieve climate neutrality by 2050 by reducing net GHG emissions at least 55% from 1990 levels.

EU already decreased total of 8 GHG emissions (as reported to the (European Commission, 2022) - excluding land use, land use change and forestry) by 34% between 1990 and 2019. Although the EU has a strong track record in emission's reduction, according to 2019 Europe Sustainable Development Report, none of its members are on their track to meet the SDGs in 2030:

“*The EU urgently needs a science-based Green Deal that addresses climate change, pollution, biodiversity and overconsumption. By creating a new, inclusive low carbon circular industry and agriculture, Europe can show the world that it is possible to preserve economic prosperity, while at the same time reducing inequalities and protecting the natural resources that we all depend on for our health and nutrition*” - says (Charveriat, 2019).

Therefore, the EGD emergence is due to ensure that EU climate processes are in place to achieve the SDGs by setting it on the green transition path with an ultimate goal of reaching climate-neutrality by 2050. For the following decades the EGD will be the cornerstone for the EU's strategy to achieve several SDGs and help to pursue major goals set by the Paris Agreement.

1.2.2 Objectives of EGD

Becoming climate-neutral means that, by 2050 EU countries will have to reduce their emissions and find ways to compensate the remaining and unavoidable emissions to reach a net-zero balance. (European Council, 2019) underlined that

“*The transition to climate neutrality will bring significant opportunities, such as potential for economic growth,...and technological development*”.

For the purpose of achieving the main objective, the EGD seeks to achieve full decarbonization of the energy system, transportation, buildings, and industry, promote circular economy, resource efficiency and minimize waste generation. Therefore, the EGD with its policy initiative's package, supports the transformation of the EU into a “fair and prosperous society” with a modern and competitive economy. It's oriented towards a holistic and cross-sectoral approach and recognizes that related policy fields must all work towards the objective of tackling climate-related challenges. The policy initiatives captured under the EGD include climate action, environmental protection, energy, transportation, industry, agriculture, and sustainable finance - all being interconnected and mutually reinforcing.

1.2.3 Key policies and initiatives

For the EGD delivery transformational changes are needed, guided through context-specific policies. Several policies have already been designed across the three pillars of economy, society and natural environment; It includes internal sectors of clean energy supply, industry, production and consumption, large-scale infrastructure, transport, food and agriculture, construction, taxation and social benefits. However,

in order to approach them, it's necessary to increase the capacity of ecosystems and the natural environment by protection, restoration and a sustainable use of resources. Moreover, the EU is also investing in digital transformation in order to efficiently enable the transition.

The EGD adopts the approach by leveraging various policy tools, including regulation and standardization, investment and innovation, national reforms, dialogue with social partners, and international cooperation. These policy levers are supporting the three fundamental pillars of the Green Deal: the economy, the environment, and society. Further policy incentives are specifically tailored to address the unique challenges and opportunities within each of these pillars.

1.2.3.1 Climate Action and Environmental Protection

The *European climate law* stands as a fundamental component of the broader EGD, which was adopted in June 2021. This legislation imposes legal obligations on member countries to achieve both the 2030 and 2050 climate targets, thereby providing a framework for actions for reducing emissions and attaining climate neutrality (Council of the European Union, 2023).

Another tool for operationalizing goals is the *Fit for 55 package*, comprising a series of legislative proposals designed to translate the objectives of the EGD into enforceable laws. The package serves to facilitate the implementation of new initiatives and ensure that EU policies align with the climate goals agreed upon by the Council and the EU Parliament. The package includes rules and revisions for various sectors, including renewable energy and energy performance of buildings, transport, emissions trading system (EU ETS) and reductions, GHG removals from land use and forestry.

For that reason, the *EU Biodiversity Strategy* for 2030 aims to restore EU's stock of natural capital by increasing the area of protected land and sea and the extent of ecosystem repair. In parallel, the *EU Forest Strategy* linked to the *EU Biodiversity Strategy* is aimed at minimising the negative influence of the EU on the global deforestation through the financial support and planting of 3 billion new trees in the EU area by 2030.

Recognizing that the food system is the corner piece in achieving climate neutrality, the "*Farm to Fork*" strategy focuses on the transformation of the current EU food system into a sustainable model. The strategy highlights the need of ensuring sufficient food production within planetary boundaries and supports the sustainable food production and consumption practices.

1.2.3.2 Social and Environmental Health

Climate neutrality is most difficult to attain in areas where industries depend on carbon or where the population is employed in these sectors. The EU has adopted a *Just Transition Mechanism* to achieve a fair shift to the low-carbon economy. This mechanism offers funding and expertise for the areas most impacted by the change,

creates employment opportunities, reskilling initiatives, supporting research, innovation, and investment in green industries. Further, it deals with infrastructure, transport, energy efficiency, and energy poverty.

In the period of 2021 the Council approved the EU strategy on *Adaptation to Climate Change* which proposes a long-term vision for transforming the EU to a climate-resilient society, fully prepared for the impacts of climate change. A year later, in order to respond to extreme weather events, *Adaptation of Civil Protection* was adopted focusing on three phases of prevention, preparedness, response and recovery.

One of the key areas that are important in the drive towards climate neutrality is the decarbonization of energy use, with special reference to social considerations. Energy consumption constitutes 75% of EU's emissions, and about 30% of these emissions are from the building sector. Hence, reducing carbon intensity of building stock is one of the goals in the EU's 2050 strategy. In response, the EU is amending the existing legislation regarding energy efficiency and the renewable energy. The Commission adopted the Renovation Wave Strategy to increase the renovation rate for energy efficiency by 2.5 times by 2030.

1.2.3.3 Sustainable Finance and Investments

Transition to a circular economy has been one of the key objectives. To this end, the EU Commission unveiled the guiding framework of *Circular Economy Action Plan* in March 2020. The action plan places particular attention on batteries, packaging, plastics, textiles, construction, food, electronics, and information and communication technology.

Building upon the initial action plan, the EU Commission, two years later, proposed a revision of existing regulations pertaining to waste batteries. This revision includes updates to mandatory requirements for recycling and production processes, and aligns with principles of the circular economy. The aim is to improve the efficiency of battery management systems, ensure the resources' recovery, and minimize the environmental impact of battery waste.

Although the hazardous nature of chemicals can be dangerous to people and environment, they also play important role in the economy. Recognizing this, the EU has developed a *Chemicals Strategy for Sustainability* that proposes its vision for chemicals policy to safeguard health and guarantee the toxic-free environment.

Additionally, industries hold the responsibility in driving the Agenda's objectives. To maintain their position as key drivers of economic growth, they must undergo a greener transformation and align with the sustainability principles. To this end, the *European Industrial Strategy* has been designed, which focuses on adoption of innovative digital technologies and sustainable practices.

1.2.4 Financing Tools

The carbon-neutral shift will require increased public investment to direct private capital towards climate action. According to the Commission's estimate, achieving 2030 climate and energy targets will require EUR 260 billion of additional annual investment, about 1.5% of 2018 GDP. To organize those resources, the *European Green Deal Investment Plan (EGDIP)* has established. EU members have committed 30% of the EU's long-term budget for 2021-2027 and the Next Generation EU initiative towards climate-related projects. As a result, over €550 billion was mobilized in the multiannual budget, which includes €195 billion from the Recovery and Resilience Facility, and €80 billion from the Cohesion Fund and the Regional Development Fund. According to the (Council of the European Union, 2023), the part of revenues from the European Union Emissions Trading System (EU ETS) allowances will be allocated towards climate action. The budget from the EGDIP are distributed across social aspects, innovation, and environmental protection. Consideration is given to the needs of developing countries to support their climate-related efforts.

Environmental Protection - €5.5 billion between 2021-2027 has been allocated to environmental protection. Under the *LIFE* programme initiatives such as nature conservation, biodiversity, climate change mitigation and adaptation, transition to clean energy, and the circular economy are supported.

Social Sector - The social sector funds mitigate the transition effects, particularly for the most vulnerable groups. Among these funds are the Social Climate Fund, the *Just Transition Mechanism*, and the Modernisation Fund. The JTF focuses on an equitable transition process and support citizens, industries, and workers in regions most impacted by this transition. Similarly, the *Social Climate Fund*, with an allocation of up to €65 billion spanning from 2026 to 2032, aids individuals and businesses affected by the new emissions trading system for buildings, road transport, and additional sectors. Lastly, the *Modernisation Fund* focuses on the energy sector and will be disbursed to ten lower-income member states from 2021-2030.

Innovation - innovation funds primarily target investments in low-carbon technologies and the energy sector. *Horizon Europe* is the EU's primary funding program for research and innovation. Additionally, the *Innovation Fund* focuses on financing the development of innovative low-carbon technologies within energy-intensive industries.

International Cooperation Funds - Due to the limitations of the EU's unilateral actions in climate change impacts, partnerships with third countries have become priority. The aim of this fund is to bridge the developing countries' financial gap and enable them to undertake climate actions in line with their national priorities. They focus on capacity building, technology transfer, knowledge sharing, and policy support - to foster partnerships and mutual learning between the EU and non-EU countries to better address the climate change and its impacts.

Implication for Countries Beyond the EU

SECTION 1.3

The EGD advocates mitigating GHG emissions, in line with scientific evidence to limit the global temperature rise to below 1.5°C (Allen, 2018). Nonetheless, its goals cannot be realized through EU's independent efforts, given that the root causes of climate change transcend national boundaries and require a global response. Therefore, collaboration with non-member countries becomes crucial for addressing these challenges. (Svea Koch, 2021) emphasizes that

“Green Deal has the potential to pave the way for a climate-neutral and sustainable Europe for the coming generations. Yet, for this to be successful, it needs to go beyond providing adequate development finance and put more focus on the external dimension as an integral part of the Green Deal”.

The EU uses international conventions and bilateral relationships as instruments to enhance environmental profiles of neighboring and partner countries and encourages them to contribute to the 2050 objectives. Along with global partnerships with Arctic, Asia, and Africa, EU closely collaborates with candidate, potential candidate countries, and neighboring nations. These countries often face mutual environmental challenges such as extreme weather events, increased temperatures, biodiversity loss, and pollution - all of which exert transboundary effects. Recognizing that the transition in Europe can only yield optimal results when its neighborhood also undertakes action, the EU actively works to foster sustainable practices in these regions. Collaborations entail providing assistance for adapting legislation, upgrading implementation, enforcing capacities, and tackling common challenges. This section investigates the EGD's influence on candidate and neighboring countries. Analyzes the impacts, requirements, potential benefits, and challenges of adopting green policies, and evaluates the EU's role in supporting the GT process in these regions.

1.3.1 Influence on Candidate Countries

The enlargement of the EU inherently drives the process of *Europeanisation*. This transformative path, also referred as the preparation stage for EU accession, is accompanied by reforms in a political-legal and socio-economic systems. Those reforms are essential for meeting the conditions of accession, and manifestate the Europeanisation process, which is both a result and a driving force of EU integration. Looking at the definition of the broad concept, (Radaelli, 2004) describes Europeanisation as a process of construction, use, institutionalization of formal and informal rules, procedures, political paradigms, ways of doing things, which are incorporated into the logic of internal (national & sub-national) discourse and state policy. In other words, Europeanisation corresponds to the transfer of models and contents in the context of national systems.

EU enlargement policy, which aims the ‘democratisation’, ‘Europeanisation’, and ‘modernisation’ of candidate countries, is today the Union’s main instrument and normative power to export norms (including environmental ones), practices, and governance models beyond its borders (European Commission, n.d.). The policy outlines the criteria and conditions that candidates (Figure 6: Albania, Bosnia and Herzegovina, Moldova, Montenegro, North Macedonia, Serbia, Ukraine), as well as potential candidate countries (Figure 6: Georgia, Kosovo), need to meet to be considered for membership. These criterias include political stability, capacity to adopt and implement the EU’s legal framework (*acquis communautaire*) and aligning with its environmental *acquis* (collection of over 200 major environmental legal acts).

The EGD adds another dimension to this process by requiring candidate countries to reinforce environmental and sustainability targets. It serves as a blueprint for aspiring members and provides the roadmap for transitioning to low-carbon future. Thus, influence on candidate countries is mainly due to their aspiration for EU membership, whereas they are expected to align their regulations with the Union’s environmental standards. Candidates, in their pursuit of EU accession, are required to showcase their dedication to different objectives, including the reduction of GHG emissions, biodiversity preservation, and promotion of renewable energy sources. Meaning that by committing to the EGD they simultaneously prepare themselves for EU membership.

1.3.1.1 Alignment with EU Environmental Standards and Regulations

The perspective of EU membership for the candidate/potential candidate countries requires compliance with the *Environmental Acquis*, which is a collection of all environmental laws, comprising over 200 legal acts covering horizontal legislation, environmental impact assessment, strategic environmental assessment, access to information, waste management, climate change, water and air quality, nature protection, industrial pollution control and risk management, chemicals and genetically modified organisms, noise and forestry (European Union – Central Asia Water, Environ-

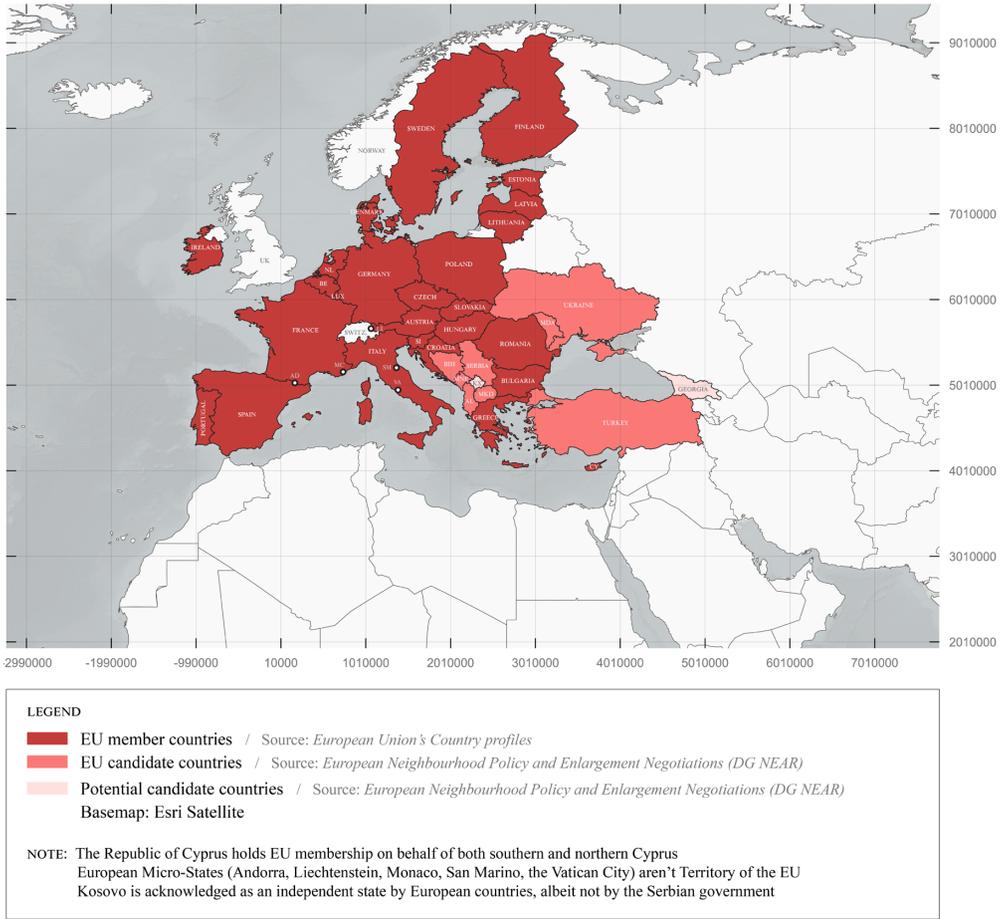


Figure 6: EU 27, cadidate and potential candidate countries

ment and Climate Change Cooperation (WECOOP), 2023). On top of environmental acquis, the EGD emphasises achieving sustainability and reducing carbon emissions. Notably, by the date of accession, candidate countries are expected to apply related environmental policies and reforms that reflect the principles of the EGD. These standards encompass a wide range of environmental issues, including but not limited to: *Climate Action* - meaning that candidate countries are expected to set targets for reducing emissions, promoting renewable energy sources, and improving energy efficiency. They must develop national climate action plans that align with the EU's commitments under the Paris Agreement. Candidates need to demonstrate their commitment to conserving biodiversity, implementing measures to safeguard ecosystems, reducing pollution, and comply with EU directives on air quality and water management. Besides that, the EGD advocates for a shift towards a *circular economy*, which emphasizes recycling, waste reduction, and resource efficiency. Adopting sustainable consumption and production practices is closely linked to the development

of waste management strategies. Promoting sustainable agriculture practices and responsible land use is another aspect, which includes sustainable farming techniques, soil conservation, and reduction of agricultural emissions. However, all of the above needs a proper mechanism to identify and address potential environmental consequences of major projects. Consequently, integrating *environmental impact assessments* into decision-making processes is the essential point for candidate countries.

The EGD also influences the candidate countries aspiring to join the union. For instance, Ukraine, as one of the candidates, has a long history of navigating through environmental policy changes to harmonize them with EU standards. The progress is observed in certain areas; In May 2017, Ukraine aligned with the EU's environmental impact assessment and strategic environmental assessment directives (Верховна Рада України, 2017). Few years later, according to the recent landmark law, it introduced the European hierarchy of waste management to modernize waste processing infrastructure (Верховна Рада України, 2022). Additionally, in the same year, cooperation with the EU's LIFE program on nature conservation and climate action, provided support for post-war reconstruction to tackle soil and water decontamination through nature-based solutions (European Commission, 2022). Ukraine's path to EU membership is linked to its ability to harmonize its environmental policies (Liudmyla Golovko, 2022).

1.3.1.2 Governance and Institutional Reforms

Candidate countries are also required to undergo governance and institutional reforms. It means to reinforcing governance structures, improving institutional capacity, and ensuring the effective implementation of policies. From a broader perspective, these initiatives can be categorized into several thematic blocks;

Environmental governance framework whereas candidate countries need to establish or strengthen their frameworks. It involves creating dedicated institutions and agencies responsible for environmental protection and sustainable development. This includes developing clear roles and responsibilities, defining reporting structures, and coordinating among governmental bodies. Along with governance, candidates must adopt and enforce environmental legislation and regulatory framework that aligns with EU directives, including laws related to climate change, waste management, air and water quality. *Institutional Capacity Building* is another essential factor, as candidates are required to build the technical expertise and capabilities of relevant government agencies and departments responsible for environmental management. However, those institutional shifts need to be transparent and publicly accessible.

Public participation and civil society involvement are another fundamental aspects in decision-making processes and in defining governance reforms. Candidates are asked to encourage public engagement and incorporate stakeholder perspectives in policy formulation. However, evidence-based decision-making should be supported by the reliable data. Therefore, establishment of *data collection and monitoring systems* are

further essential factors that candidates are required, in order to assess their progress toward environmental targets. Last but not least, candidate countries are encouraged to improve *International Cooperation and Partnerships* for a more effective collaboration with neighboring countries, international organizations, and EU member states to tackle transboundary environmental issues.

Despite a fact of the EU being a global leader in environmental policy frameworks and programs (Henrik Selin, 2015), implementation effectiveness of these initiatives varies across the countries. This again point to the complexity of environmental governance in diverse political and socio-economic contexts (Haris Alibaši, 2023). It's most apparent in non-EU member states such as Bosnia and Herzegovina, where political and security concerns arising from post-war situations have impeded the execution of EU-driven changes (Haris Alibaši, 2023). According to the Policy Transfer Framework in the Environmental Governance of Non-EU and EU Member Countries: A Comparative Analysis of Bosnia and Herzegovina and Croatia, the country's "complex political structure, fragmentation, and weak governance systems" impede the successful execution of EU environmental policies. The absence of a clear route and corruption further complicates the reform transferring process.

1.3.1.3 EU funding & Support

Policy and institutional adjustments require financial and technical aid to ensure their effective implementation. Among the EU provided supports, one of the major one for candidate & potential candidate countries is the *Instrument for Pre-Accession Assistance (IPA)*. The IPA supports candidates in implementing political, economic, administrative, and environmental reforms required for EU accession. It focuses "to reinforce environmental protection, increase resilience to climate change, accelerate the shift towards a low-carbon economy, develop the digital economy and society and strengthen sustainable connectivity in all its dimensions" (European Commission, 2021-2027).

More specifically, Instrument for IPA II (European Parliament, 2014) focused on supporting reforms related to the environment, climate action, and regional development. For instance, through the years 2014-2020, €639.5 million was allocated for Albania to support climate action, transport, rural development, regional and territorial cooperation (European Commission, 2021). The projects centered on aligning with EU standards, addressing issues such as improved waste and water management, air pollution control, regional connectivity, sustainable local development in border areas, food safety standards, and more. Regarding the technical assistance, support was provided in areas of capacity building for environmental institutions, strengthening public participation in environmental decision-making processes, supporting the development of environmental strategies and action plans.

Moreover, the EU provides sectoral financial support to strengthen specific environmental and energy sectors. Funds are directed toward priority areas in line with the EGD. For instance *Technical Assistance and Capacity Building* supports candidate

countries to improve their institutional capacity, governance structures, and policy implementation. It encompasses expertise, knowledge sharing, training programs, and study visits to member states to learn from best practices. Similar to technical assistance and capacity building, the EU facilitates *Twinning and Peer-to-peer programs*, connecting institutions from candidate countries with counterparts from EU member states. These projects collaborate public sector professionals from both parties to achieve outcomes through mutual knowledge exchange, and helps candidates to learn from the experiences of EU countries in implementing environmental policies (European Commission, n.d.). A success story in this regard is the GreenFORCE project (Foster Research Excellence for Green Transition in the Western Balkans), funded by (Horizon 2020, n.d.), which works towards “enhancing WB research profile, strengthening research and management capacities...and contributing to convergence between WB and EU research capacities” (GreenFORCE, n.d.).

Finally, to ensure efficient fund distribution and transparency, the EU monitors and evaluates projects funded under pre-accession assistance. Candidate countries are mandated to regularly report on project progress and outcomes. Systematic reporting helps to gradual integration by adopting EU norms and regulations, and paves the way for smoother integration processes.

1.3.1.4 Socio-economic impacts & Just Transition Mechanism

Besides the environmental and institutional influence, the EGD has socio-economic impacts on candidate countries. The *Just Transition Mechanism (JTM)* is a key tool which targets the most affected regions and social groups. While its primary focus is on EU member states, the JTM also includes support for non-EU countries (European Commission, 2019). More specifically, the so-called ‘Sister initiative’, launched in December 2020, works for coal regions in the WB and Ukraine to support the just transition of coal-based energy production in 17 selected regions (European Commission, 2021). Transition projects promotes the growth of green industries in those regions that were previously dependent on coal. The latter is facilitated by workforce reskilling, job creation and diversification, which works towards reducing unemployment rates.

The socio-economic impacts of the JTM extend to vulnerable communities. Energy efficiency programs works to alleviate poverty and improve social inclusion, and ensures that the benefits of GT reach all societal segments. For example, in North Macedonia, collaborative programs with Greece repurposes mining sites, explores alternative energy solutions, and implements smart agriculture for economic diversification and job security (European Commission, 2021). Prioritizing renewable sources and energy efficiency, apart from reducing the candidate countries reliance on imported or locally produced fossil fuels, enhances their energy security. This, in turn, contributes to a more resilient economy.

Another case is Georgia's energy transition through the EGD framework. EU is supporting the energy efficiency and renewable sources' integration in the rehabilitation

of public buildings (Delegation Press and Information Team GEORGIA, 2023). Initiative helps to reduce electricity bills and total emissions. Georgia's alignment with EU energy legislation under the support of the EGD stimulates increased investments in clean technologies and the energy sector. Which in turn helps to expand investment opportunities and attract capital from investors. Therefore, aligning with the EGD provides candidate countries opportunities to improve their economic competitiveness for businesses sectors.

1.3.2 Influence on Neighboring Countries - EaP

The EU with neighboring countries, situated to its geographical proximity, had been forming a political and economic structures. As stated by (Beckouche, 2016), the term “neighbor” went through a transformation and now it is less likely to be seen as a past military adversary and more likely to be acknowledged as an essential economic, political, and environmental collaborator. Among those collaborations, particular focus is set on environmental cooperation. The scientific studies (IPCC, 2022) reports) and growing awareness on climate change shows that it is not solely a country-specific concern and has regional implications. Pollution, whether in the form of air or water contamination, spreads to neighboring territories and can affect nearby areas. Therefore, the Union is gradually developing stronger ties with neighboring nations and involves progressive economic integration and political collaboration. In order to simplify this integration, the European Commission initiates technical assistance and initiatives to harmonize policies, institutional frameworks, and financial systems of third countries with those of the EU. These efforts are realized through the IPA and the European Neighbourhood Instrument (ENI) (European Union - External Action, 2021).

The ESPON project “Europe in the World” (Bernard Corminboeuf, 2000-2006) suggested a division of the world based on economic, cultural, and historical factors. Boundaries of “European region” differ based on these indicators. The atlas is built on the ENP list of neighboring countries and specifically focuses on the European region and its neighboring countries. Therefore, in this context, the ENI serves as the primary framework for analyzing the EU's neighboring context. It includes 16 bilateral and/or multilateral cooperation initiatives, and incorporates the two major neighboring regions of Eastern and Southern neighborhood (Figure 7). Among the two partners, this sub-section sets a particular focus on the EaP, which includes Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine. Among those, Ukraine and Moldova were granted the candidate status in 2022, while Georgia still holds a potential candidate status and will be recognized as candidate once it completes the necessary reforms set by the (European Parliament, 2022). The following text will evaluate the impact of the EGD on countries that are in the immediate vicinity of the EU but are not part of it.

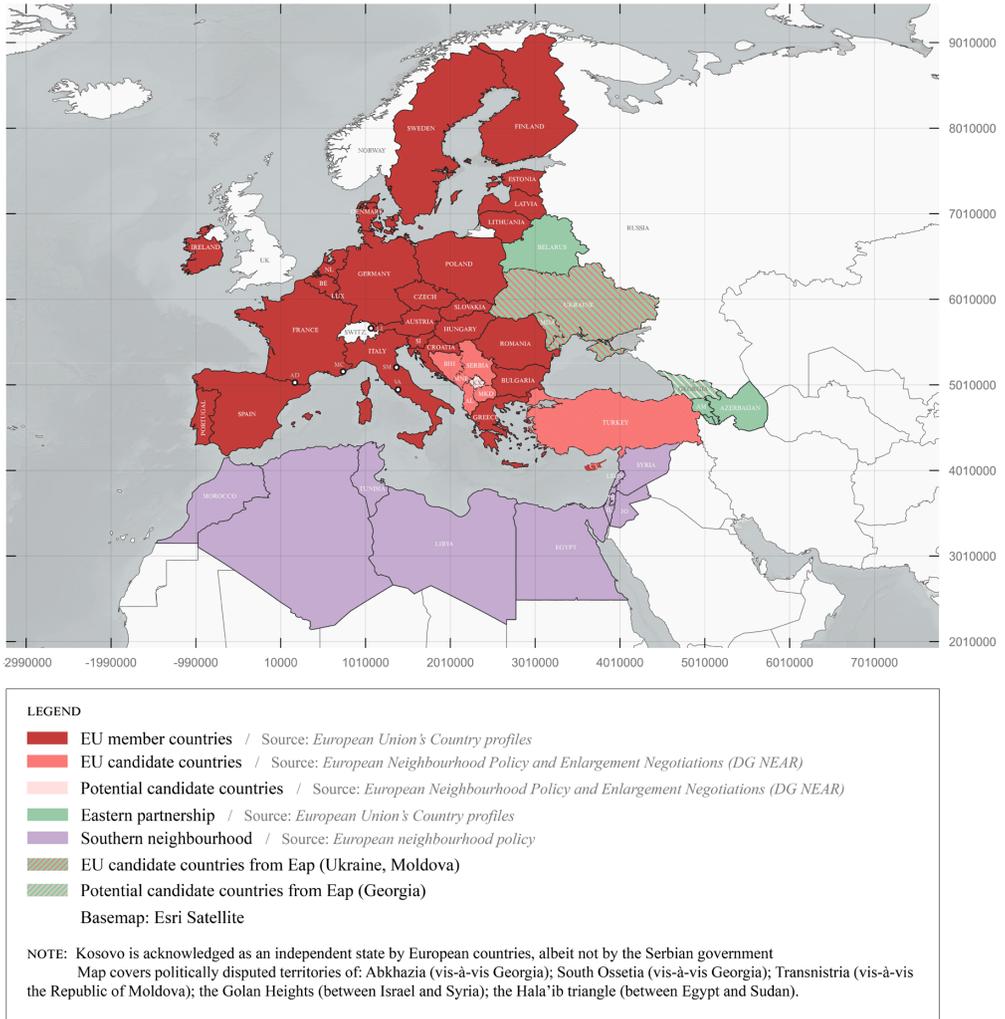


Figure 7: European Neighboring Countries

1.3.2.1. EU and Neighbors: Cooperation, Partnerships & Incentives for Sustainability

Through time cooperations, partnerships, and incentives have been woven between the EU and its neighboring countries to address shared environmental challenges. Among those mechanisms, *European Neighborhood Policy (ENP)* still continues to be a core framework. Key priorities of migration, economic development for stabilization, and security, (European Union - External Action, 2021) works together to “increase their environmental and climate resilience, promote circular economy, protect biodiversity and support the sustainability of the food chains in both regions”. In line

with the EGD, the ENP provides backing for energy collaboration, security (energy sovereignty) and sustainable economic growth - including to promote energy efficiency, diversify its sources and transition to a low-carbon economy.

EaP is a specific dimension of the ENP focusing on the Caucasus countries of Armenia, Azerbaijan, Georgia and on Belarus, Moldova, Ukraine. Among diverse areas of cooperations, the EU collaborates with them on environmental issues as well. The EaP supports the delivery of several global policy objectives, including the Paris Agreement on Climate Change and the UN 2030 Agenda (European Neighbourhood Policy and Enlargement Negotiations, n.d.). In the 2017 summit, a new agenda “20 Deliverables for 2020” (Council of the European Union, 2017) was introduced to achieve tangible environmental outcomes with specific objectives. Under this incentive, member states and the EaP countries worked together on objectives towards climate resilience, digital transformation and sustainable economies. In terms of achievements, as outlined by (Violeta BULC, 2020) in the TENT-T Investment Action Plan, nearly half of the local governing bodies in the EaP committed to reducing CO₂ emissions by joining the Covenant of Mayors (EU initiative focused on local energy and climate efforts). Additionally, for the year 2025, top ten priority targets has been identified as part of the agenda. These targets include key investments in areas such as sustainable and smart connectivity (3,000 km of priority roads and railways built or upgraded), sustainable energy (250,000 households reduce energy consumption by at least 20%), and environment (Another 3 million people gain access to safe water services; air quality monitored and improved in 300 cities).

The ‘*EU4 Climate*’ is another initiative which aligns with 2015 Paris Agreement on Climate Change (NDP, EU4Climate, n.d.). The primary goal is to aid in climate change mitigation/adaptation and progress toward a low-emission economy. Expected results under EU4 Climate are to implement/update nationally determined contributions to the Paris Agreement and increase their commitment to climate action. Moreover, under the initiative, National mid-century low-emission development strategies (LEDS) serve as a policy instrument to identify the GHG sources and prioritize options for their mitigation. Along with attention given to sustainability, results are also considering addressing the war-related needs of the Ukraine and contributing to its green reconstruction. Introduction of Domestic Emissions Monitoring, Reporting, and Verification (MRV) is another result expected, which will improve data transparency and accountability and allow for informed decision-making. For instance, under this incentive, Moldova is already finalizing the Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) laws (EU4Environment, n.d.).

The EU also engages in *bilateral cooperation agreements* with individual neighboring countries to address specific environmental challenges. These agreements vary in scope and can cover areas such as environmental standards, conservation, and sustainable development projects. They are primarily initiated due to countries’ motivation for accession to EU. For instance, in 2017, Moldova signed an Association Agreement

(UR-Lex, 2017) with the EU, primarily focusing on political cooperation, trade, and reforms. Notably, this agreement also encompassed sustainable development and cooperation in energy efficiency and renewables. Through joint committees, working groups, and high-level summits, the EU engages in a discourse with neighbors and exchanges the shared responsibilities.

1.3.2.2. Harmonization with EGD policies & initiatives

As already stated, the implications of the EGD extend far beyond the EU's borders and impact neighboring countries and their approach to policies and sustainability practices. EaP strategy encompass initiatives to reform resource-intensive sectors (e.g. plastic, construction, textiles), address water quality and availability, develop renewable energy sources, and scale up action in areas that are critical for well-being. While the Southern Neighbourhood focuses on specific action points, large-scale investments in renewables, and biodiversity protection (Chloe Teevan, 2021). In both scenarios, the prospect of economic collaboration with the EU is the main driver to harmonize their environmental policies with the union standards. Nevertheless, the EU's financial instruments, including the Just Transition Fund and the European Regional Development Fund, are pivotal in aligning neighboring countries with EGD initiatives. Neighboring countries use these resources for the technology transfer and innovation.

As highlighted by (Maria Pastukhova, 2020), the EU has a potential to support the exchange of normative regulations and aid neighboring countries in technical standards's improvement by aligning their regulatory systems to EU's one. This alignment could be central for integration into the EU's energy markets. An illustration of this can be observed in the instance of Ukraine, as evidenced by the (United Nations Economic Commission for Europe, 2023). According to a research of "Rebuilding Ukraine with a Resilient, Carbon-Neutral Energy System", the country's dependency on fossil fuels accounted for 70% of its primary energy supply in 2020. Despite the small share of primary energy supply (up to 6.6%), government decarbonization efforts, especially in the renewable energy field, are tangible. Ukraine has implemented a series of regulations for the use of renewable energy. In 2021, the Government approved the second (updated) Nationally Determined Contribution of Ukraine to the Paris Agreement (NDC2), which commits to reducing GHG emissions to the level of 35% compared to 1990 by 2030 (United Nations Framework Convention on Climate Change, 2023). Between 2018 and 2020, the commitment to RE saw an increase in installed capacity from about 9 GW. The same year, Ukraine saw a 23.5% increase in solar photovoltaic (PV) capacity and a 771% increase since 2015 (United Nations Economic Commission for Europe, 2023). Under the influence of the EGD, Ukraine transformed its energy sector that further helped to emissions reduction. According to (United Nations - Climate Change, 2022) National Inventory Report, in 2020, Ukraine's GHG emissions (including (LULUCF) sector), dropped by 11.7% compared to 2019 year.

1.3.2.3. Green Transition Pathways for EU Neighbors

Despite the EU investments, many neighboring countries face economic constraints that hinder their ability to align with EGD. Examining the Income per capita in the neighbourhoods data for 2010 year, reveals great disparities within the regions. Internal inequality is particularly visible in Ukraine, where coastal and capital city areas starkly contrast with the inner regions. Within the WB regions, Bosnia and Herzegovina and Albania stand out as the most unequal countries. Most economically struggling countries have the lowest income per capita indicator and the higher dependency on fossil fuels due to their affordability (Energy Institute Statistical Review of World Energy, 2021).

Besides, political instability is another challenge for GT, that arises from Europe's proximity to conflict-affected neighbors. This dynamic challenges both - the policy coherence in the region and implementation of long-term sustainable strategies. In recent years, several conflicts and wars have been unfolding in EU and its neighbors, including the interstate border dispute between Armenia and Azerbaijan over Nagorno-Karabakh (Waal, 2023) and Russian invasion of Ukraine (since 2014). In other parts of Europe, tensions persist in unresolved conflicts in the post-Soviet space, such as the Transnistria in Moldova and ethnic and political tensions arising from the Bosnian War (Lampe, 2023). Additionally, Georgia still faces territorial disputes with Russia for Abkhazia and South Ossetia. The war in Ukraine, according to the Ministry of Environmental Protection and Natural Resources (2022), has caused severe damage to the environment, both immediate and longer-term consequences. Most of them have transboundary impacts on neighbors and beyond.

Along with environmental damage, conflicting and politically tense regions face difficulties in implementing long-term, sustainable strategies. Those with frequent changes in government possess a higher risk of shifting environmental priorities and disrupts the alignment process. As stated by (Olga Litvishko, 2023) "Conflict communication in disrupting sustainable development of regions", numerous factors disrupt sustainable development as they "weaken, constrain or destroy social stabilization mechanisms". Geopolitical conflicts, as in the case of the Caucasus region (Stockholm International Peace Research Institute, 2016), lead to the erosion of a country's national interests and disrupts the possibilities for its sustainable development.

Corruption and lack of transparency are another obstacles in those regions, that can possibly hinder decision-making processes, divert funds from initiatives, and result in the misallocation of resources. Conversely, these challenges also come with opportunities. For example, strong civil society participation can exert pressure on governments to prioritize environmental concerns, while NGOs and grassroots movements can hold governments accountable for their environmental commitments. One illustration of this can be seen in the rise of civil society in Georgia, including social movements, interest groups, student clubs, and activist groups that are involved in the decision-making processes of the country. According to the "Civil Society Brief"

(Civil Society Center, 2018), in recent times, a number of well-organized and influential environmentalist groups and Civil Society Organizations (CSOs) have emerged.

Additionally, the technological gap between neighboring countries and EU member states should also be taken into account. Access to new technologies, expertise, research and development capabilities is limited, and challenges to innovate in line with EU standards. Social and cultural attitudes can be other challenges in multicultural regions like EU neighbors; Based on data synthesis, cultural traits are linked to the achievement of all 17 SDGs and 79% of SDG targets (Xinzhu Zheng, 2021). Resistance to change, lack of awareness, and deeply ingrained habits could be barriers to effectively implementing environmental policies.

Despite challenges, there has been progress and opportunities in aligning with EU standards. Through collaborative partnerships with the EU and neighbors (ENP, EaP, Mediterranean Partnership, Black Sea Synergy) joint initiatives, knowledge exchange programs (HORIZON 2020, EaP), and technology transfer agreements (EaPConnect, Innover-East, GRECO, Black Sea Horizon) have facilitated the expertise sharing to bridge the technological gap. Some countries have already succeeded on policy reforms and capacity-building programs, and have been preparing a fertile environment for alignment with EU standards. For instance, as a response to high dependency on fossil fuels, in 2021, Armenia introduced the Renewable Portfolio Standard (RPS), to align its policies and market protocols with the EU (International Energy Agency, 2021). In terms of the capacity-building programs, Armenia invested in training engineers, technicians, and policymakers in the latest RE technologies and grid integration methods, often conducted in collaboration with international experts.

To address social and cultural challenges, neighboring countries have launched public awareness and education campaigns (“Green City Chisinau”, “Green Arm”, “Green Kyiv”) to inform citizens about environmental issues. They focus on waste reduction, water conservation, waste recycling, energy efficiency, and sustainable transportation. They also include on-site visits, interactive workshops, eco-themed events in schools, and public events.

1.3.2.4. Financial support from EU

While the EGD primarily focuses on domestic transition, its effectiveness hinges on the transitions in other regions. In order to enable changes in neighboring countries, the EU provides financial support through various programs and initiatives, with a general aim of promoting stability, prosperity, and a good governance. Assistance is provided to both Eastern and Southern neighborhoods, for which the European financial institutions contribute to over 50% of the total climate change financing. Collectively, both EU institutions and member states are the primary backers of climate change initiatives in the region (Mariella Di Ciommo, 2021).

The *Neighbourhood Development and International Cooperation Instrument - Global Europe (NDICI)* is the major framework of funding sources for EU external action. The NDICI incorporates the *External Action Guarantee (EAG)* and introduces the new *European Fund for Sustainable Investments Plus (EFSD+)*. These components work in tandem to use private sector resources for EU external action by providing guarantees, grants through ‘blending’ mode (mixing EU grants with bank loans), and technical assistance to improve the quality of projects and ease the implementation process. EFSD+ as the core investment instrument raises up to €135 billion. Together with EAG its potential is estimated to generate investments exceeding half a trillion euros between 2021-2027.

European Neighborhood Instrument (ENI) is another important financial supporter, primarily built on previous instruments (ENPI), which allocates a budget of €15.433 billion for all 16 Neighbourhood countries (EU Neighbours, n.d.). Additionally, among European financial institutions are the *European Investment Bank (EIB)*. It’s been one of the key players and positioned itself as the EU’s climate bank by offering climate finance for supporting EGD within and outside the EU. In November 2020, the (EIB Group, 2020) unveiled Climate Bank Roadmap for the 2021-2025 timeframe, detailing its commitment to:

“support the transition of the European Union to a low carbon, climate resilient, and environmentally sustainable economy, taking an integrated approach inside and outside the EU.”

Besides the EIB, there are other implementing partners such as *European Bank for Reconstruction and Development (EBRD)* and *European development finance institutions (EU DFIs)* (European Commission, 2020). They provide loans and financial assistance for initiatives such as renewable energy projects, energy efficiency improvements, and environmentally sustainable infrastructure development.

02

**WESTERN
BALKANS**

OVERVIEW

This chapter examines the green transition in the Western Balkans, framed within the Green Agenda for the Western Balkans (GAWB) and corresponding to the EGD. It begins by tracing the region's progression from the post-independence to engaging with environmental policy reforms essential for EU integration. The discussion then shifts to the WB' developmental stages and environmental challenges.

The heart of the chapter details the GAWB, outlining its goals toward clean energy, circular economy, depollution, sustainable agriculture, and biodiversity protection. It presents specific actions and funding mechanisms designed to achieve these objectives. Moreover, the chapter assesses the GAWB's implementation, synthesizes data and findings from interviews to identify progress and barriers for green transition.

NAVIGATION THROUGH THE CHAPTER

2.1

*Context of
WB*

2.2

*Green Agenda for
the Western Bal-
kans*

2.3

*Implementation
challenges and
progress*

Context of Western Balkans

SECTION 2.1

2.1.1 Recent Development Stages in WB

According to (Jano, 2008), the origin of the term ‘Western Balkans’ is connected to the Austrian Presidency of the EU, who officially introduced it in 1998. Based on (Dunay, 2023), “western Balkans’ term had been first used by the EU to refer to the group of South-Eastern European countries, which aren’t yet members of the European Union. In both cases, the term corresponds to the region consisting of Albania and “ex-Yugoslavian” (Minus Slovenia) countries of - North Macedonia, Serbia, Montenegro, including the international protectorate of Kosovo*¹, Bosnia and Herzegovina (Figure 8. Western Balkan Countries).

Conceptualizing the term “Western Balkans” and addressing this group contextually is crucial because all six countries in this region underwent similar historical processes. These recent processes are outlined by (Jano, 2008) in “*From ‘Balkanization’ to ‘Europeanization’: The Stages of Western Balkans Complex Transformations,*” where he defines three core historical stages in the WB region - state building (so called ‘last’ Balkanization), the ‘delayed’ transition and EU perspective integration (The ‘pre-’ Europeanization).

The state building (‘last Balkanization’)

The region’s complexity arises from intricate political, ethnic, and social developments that have shaped its present-day dynamics. This complexity is primarily rooted in the early 1990s, following the fall of communism and the subsequent rise of nationalism. This phase corresponds to Dorian Jano’s initial stage, characterized as the “*Nation and state-building process as the ‘last’ Balkanization,*” marking a period of nation-state formation and competition among ethnic groups. This stage encompasses the disintegration of Yugoslavia and the “*unfinished state-building in Albania*”.

1 In line with Resolution UNSCR 1244 (1999) and the ICJ opinion on the Kosovo declaration of independence.

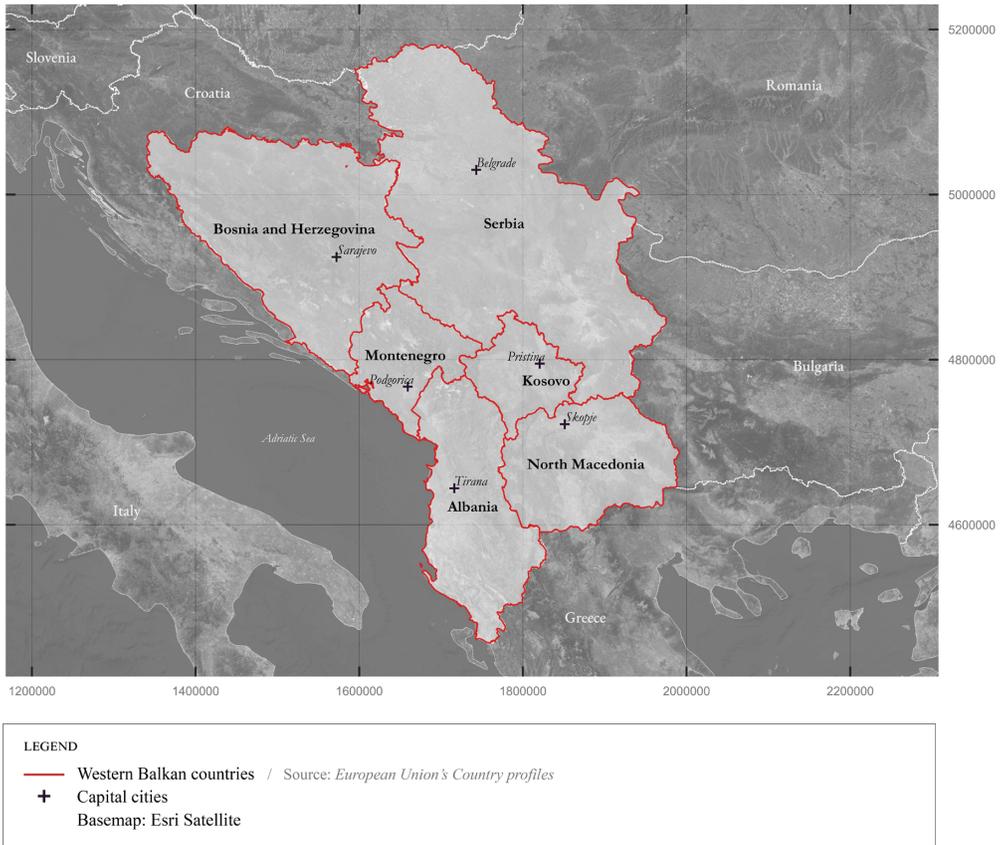


Figure 8: Western Balkans Countries

The first and most turbulent phase is associated with the collapse of the Socialist Federal Republic of Yugoslavia² in the early 1990s. Republics underwent under political and economic crises accompanied by internal tensions; Croatia’s pursuit of independence escalated into a violent struggle among ethnic Serb minorities. While Bosnia and Herzegovina, with its mixed ethnicities, faced a war after its 1992 independence referendum, involving Bosnian Serbs, Croats, and Muslims. Simultaneously, Kosovo’s independence efforts led to conflict with Serbia in 1998, escalating to NATO’s intervention in 1999 and massive displacements of Albanians and Serbs. In contrast, the current North Macedonia (previously known as Former Yugoslav Republic of Macedonia) peacefully declared independence in 1991 but faced late ethnic tensions in 2001. Therefore, the Yugoslav breakup was marked by violent conflicts and ethnic cleansing – with thousand of lost lives and suffering embedded in the memory of Balkan people.

¹ comprised of six republics (Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia, and Slovenia) and two autonomous provinces (Kosovo and Vojvodina)

Furthermore, the “*unfinished state-building in Albania*” correspond to Albanian chaotic crisis in 1997, triggered by the collapse of pyramid schemes (Kubicek, 1998). Despite President Sali Berisha’s attempts to take the control back, anarchy was spread into the country with violent gangs controlling the major cities. The chaos was eventually resolved by the intervention of international forces and establishment of a new government, that quickly gained the international support. In summary, the term “last Balkanization”, encapsulates the disintegration processes of the WB and characterizes the state of the region during the 1990s, including the Yugoslav break-up and failure in Albania.

Transition process and its impacts

The subsequent phase is referred to as the *transition process*. The term ‘transition,’ especially within the realms of political sciences, policy-making, and public discourse, was widely used to denote a historical era following the collapse of communism. Examining the definition of “transition,” some postsocialist scholars noted that it isn’t solely about moving from one order to another but entails “*rearrangements, reconfigurations, and recombinations that yield new interweavings of the multiple social logics that constitute a modern society*” (Stark. D., 1998). Hence, transition, in a broader sense and within this specific context, signifies interconnected processes of social, political, and economic transformations resulting from the collapse of the socialist regime in the early 1990s.

After the wars of the early 90s, the WB initiated a process of post-war reconstruction and reconciliation. International peace agreements³ and transitional justice mechanisms, were negotiated to establish frameworks for peace, settle territorial disputes, define new borders, and offer clarity on the geographical boundaries of newly formed states.

Beyond the delineation of new geographical boundaries, the transition from socialist regimes to democratic, as well as the market-oriented systems, has been pivotal for shaping the trajectory of WB countries. It necessitated the establishment of new institutions to ensure the separation of the state from party control and the introduction of a market economy distinct from state economic planning. The region faced the challenge of implementing fundamental reforms and adopting new legal and administrative practices to disentangle from the institutional legacies of communism. The transition process introduced new challenges primarily in the political and social spheres. In the political domain, a key challenge was the establishment of

³ The Dayton Accords - concluded the Bosnian War in 1995 and established the framework for Bosnia and Herzegovina.

Kumanovo Agreement - concluded the conflict between NATO forces and the Federal Republic of Yugoslavia over Kosovo (UN Security Council, 1999).

Belgrade Agreement – redefined relationship between the Federal Republic of Yugoslavia, later as two independent countries of Serbia and Montenegro (UN Peacemaker, 2002).

liberal democracies, while the social sphere witnessed weaknesses in organizational capacity among social actors and a fragile civil society. The states' inability to effectively tackle presented challenges, highlighted the structural weaknesses of the WB nations, which lacked the governance capacities to implement essential reforms. The absence of state institutions capable of navigating through transition reforms while aligning with EU standards became evident. Thus, the establishment of institutions with ability to address these new challenges has remained a central concern in the post-conflict Western Balkans.

The 'Pre-Europeanization'

After the conflicts, WB underwent a transition to market-based systems, which resulted in rapid economic growth due to increased investments and capital. According to the World Bank and UNDP Global Footprint Network, between 1995 and 2006, Albania witnessed a doubled GDP per capita rate, while Bosnia and Herzegovina's number tripled. Conversely, Serbia faced a notable economic downturn in 1999 due to the Kosovo war (EEA, 2010). Following the conflicts and the political and economic transitions, the WB countries set on a path toward EU integration. Presently, the WB region is considered "*an inseparable part of the under formation 'new' European space*" (Radovanovik, 2012). The aspiration of WB countries to join the European Union (EU) is characterized as the 3rd phase, "Pre-Europeanization."

Nowadays these countries are actively involved in accession processes, which requires the implementation of political and economic reforms to meet EU standards. Albania has made progress in its EU accession by granting Candidate status since 2014, but challenges related to corruption, rule of law, and political polarization have posed obstacles. Montenegro has been in accession negotiations since 2010. Based on (Commission Staff, 2023) it has made progress in the rule of law, public administration, and the judiciary. challenges like corruption and organized crime remain areas of concern. Moreover, North Macedonia, being the candidate since 2005, received a green light to start EU accession negotiations in 2019. It has implemented reforms, including constitutional changes and improvements in the judiciary, to align with EU standards (Commission Staff, 2023). Additionally, Serbia has been engaged in accession negotiations since 2012. The normalization of relations with Kosovo has been a development, while challenges still persist in the rule of law, freedom of the media, and the independence of the judiciary (European Commission, 2023). In 2022, Bosnia and Herzegovina was the last of WB countries which granted candidate status. The country faces complex challenges due to its decentralized political system and ethnic divisions. Reform efforts are ongoing, particularly in areas of constitutional reforms (Commission Staff, 2022). Kosovo is the only WB country which possesses the Potential candidate status. according to (Commission Staff, 2022), it has made progress in certain areas, but challenges, including inter-ethnic tensions and the normalization of relations with Serbia, remain as the main challenge on the path to EU candidacy.

Most WB countries share common challenges and similarities in terms of their EU accession status and conditions, that are reflective of the region's complex history and ongoing political dynamics. Across the board, corruption and the rule of law serving as key areas of focus in the EU accession processes for all WB countries. Common challenges include achieving political stability, inter-ethnic reconciliation, and resolving historical disputes. Additionally, economic challenges, such as high unemployment rates and the need for sustainable economic development, are also other shared concerns.

2.1.2 Environmental landscape

As discussed, political, economic, and social transformations in the WB came at a high cost. The subsequent post-war reconstruction and rapid development, coupled with the impact of global climate change, has imposed another burden on the region's environment. This sub-section investigates the environmental landscape of the region, examining data related to precipitation, temperature, CO₂ concentration, air and water quality, biodiversity, land use, and waste management.

Precipitation and temperature

Despite variations in climatic zones among the six Balkan countries, analysis of climate change reveals a warming trend in the region, characterized by an increase in global temperature (Zoë environment network, 2012). Although precipitation trends differ based on geographical factors, the global temperature rise is increasing evaporation trends. According to the *“Study on the Climate Change in the Western Balkans Region”* (Regional Cooperation Council, 2020), regional high-risk changes include a shift towards droughts, heavy rains, and extreme summer storms that are likely to cause flash floods and high winds.

CO₂ emissions

The WB contribute considerably less to climate issues compared to highly developed countries. Regarding CO₂ concentration and share, the document on *“Climate change in the Western Balkans and EU Green Deal: status, mitigation and challenges”* (Knez, 2022) outlines that between 1990-2018, CO₂ emissions per capita in WB ranged from 1 to 8 metric tons. However, when scaling to global emissions range, the WBs' contribution is minimal compared to the emissions of the United States and China. The document *“Climate Change in the West Balkans”* provides data on CO₂ emissions and country-specific shifts in the region, even though data for Kosovo and Bosnia and Herzegovina is absent, allows for the observation in the four remaining countries.

Between 1990-2000, *Albania* experienced a decline in GHG emissions associated with changes in land use and forestry (Republic of Albania Ministry of Environment, Forestry and Water Administration, 2009). The energy sector was the largest contributor to total emissions.

Montenegro experienced a 2% decrease in overall GHG emissions between 1990-2003, primarily attributed to changes in land use and forestry (EEA, 2012). During this period, energy emissions slightly increased from 51% to 54%.

Macedonia had a big emission reduction related to land use change and forestry. Energy sector was the major contributor, accounting for 70% of emissions in 2002 (UNDP, 2008). The overall GHG emissions for the period decreased by 8%, primarily due to the decline in agricultural emissions.

Between 1990-1998, *Serbia's* GHG emissions decreased by 22%, with the energy sector being the major contributor (accounted for 79% of emissions in 1998) (UNDP, 2010).

Furthermore, the (EEA, 2010) Report regarding the Environmental trends and perspectives in the WB, studied air pollution, water quality, quantity and services, biodiversity, land use, and waste.

Air pollution

Air pollution and pollutants due to wind flows are often redistributed in countries distant from the source of emissions. In the WB, transport and industry are the major sources of emissions and air pollution. Mining and manufacturing plants, predominantly utilizing low-quality coal, also contribute to the overall emissions and lead to air contamination. Most industries and mining facilities in region operate with outdated equipment, employ old production technologies and air pollution control systems. For the transportation system, the issue is linked to the importation of second-hand, aged, and highly polluting vehicles, mainly sourced from the EU.

Water

Even though WB share multiple river basins and water resources, availability and the quality of the water varies across the 6 countries. Streams sourcing from the mountains are characterized by good/high quality, while this trend changes once the water is reaching the lower urban areas, where the mining and industries are contaminating them by heavy metals. Agricultural run-off stands as another contributor to water pollution. Besides, wastewater treatment is another issue faced by the region, where it's either poor or nonexistent. In BiH, 90% of wastewater is released without treatment, while in Kosovo, it doesn't exist at all (UNCREE, Economic Commission for Europe, 2011). Serbia's large-scale industrial sites, located on the outskirts of urbanized areas, discharge wastewater into rivers with poor treatment.

Biodiversity

The WB is characterized by a rich biodiversity, however, the historical legacy of industrialization, 90s' wars, crises and transitional steps threatened the region's natural habitats. Pressures of urban sprawl, increased productivity in agriculture, over-harvesting, irrigation, hunting deforestation, illegal timber cutting and poorly regulated exploitation of natural resources had a negative impact on the region's

ecology. After the 1990s many of the WB countries took measures to protect biodiversity and natural sources, and shortly after the decade, the share of protected areas increased. In 2007 the share of territory designated as protected areas reached 9% of the region's total surface area (EEA, 2010). Despite the steps taken on national and regional level, measures still remain insufficient. Challenges are mainly related to the insufficient resources to manage protected areas, and to the monitoring and evaluation systems to assess the impact on biodiversity and nature.

According to the **land cover** category of 2000y, around 40% of the region was covered by forests and woodland shrubs, while pastures and mixed farmland used 32% of the land, arable land 13%, with only 2% accounting for artificial areas. However, this trend has changed over the decades. One of the main drivers was urban sprawl, caused by the wars and population displacement in the 1990s. Alleviated regulations regarding privatization and construction and transitional period, were other drivers that led to the shift of the population from rural to urban areas, and increased demand for housing. Many new urban areas were constructed without proper building permits and lacked essential services, including wastewater treatment, clean water, sanitation, and other amenities. In most countries, these new urban areas were primarily developed on mixed farmland and pastures. For example, in Serbia, sprawl has extended over about 4,000 hectares, with residential, service, and industrial areas, along with transport networks and mines, replacing former farmlands and natural land covers. The changes in agricultural land use have environmental repercussions, affecting forest cover and biodiversity.

Waste

The region faces a growing challenge related to industrial and mining waste due to accelerated constructions. Landfilling persists as the main method of waste management, and illegal dumping remains an important concern. Municipal waste collection is insufficient in most countries, particularly in rural areas. Despite per capita figures in the WB countries (330 kg/cap) being considerably lower than the EU average of over 500 kg per year, there is a steady increase in municipal waste generation. Moreover, the region grapples with outdated waste facilities, and the prevalence of abandoned, illegal, and poorly managed landfill sites exacerbates the waste management challenges.

2.1.2.1 challenges and capacities for the green transition

WB countries are gradually developing the necessary regulations and strategies for climate change mitigation, however, the real-life implementation of specific projects is still at a low level (Regional Cooperation Council, 2020). One of the biggest challenges remains the dependency on coal. According to (Ruiz Castillo, 2021) *“Recent Trends in Coal and Peat Regions in the Western Balkans and Ukraine”*, coal stands as the predominant fossil fuel utilized in the WB. Among the countries, Kosovo leads

in power generation with the highest reliance on coal at 95%, followed by Serbia at 67%, BiH at 65%, North Macedonia at 51%, and Montenegro at 41%. Albania is the only country in the region that is dependent on hydropower and does not utilize coal or peat for power generation. Most of them are dependent on traditional industries, primarily thermal power plants (TPPs), many of which are outdated and require coal for functioning (Bachev, 2023). Power plants are older and less efficient, mainly lack maintenance, management, and investment.

Traditional industries constitute the primary job opportunities in many regions and increase social vulnerability during the transition to green alternatives. According to the European Commission's 2021 report, the coal industry provided a total of 46,000 jobs in the WB. Bosnia and Herzegovina have approximately 17,000 jobs in the coal sector, followed by Serbia with more than 15,000, Kosovo with around 5,000, North Macedonia with around 3,700, and Montenegro with roughly 900 workers. The phased-out approach to coal, in accordance with EU policies, could result in job losses of 0.4% in Montenegro, 0.5% in North Macedonia, 0.6% in Serbia, 1.3% in Bosnia and Herzegovina, and 1.4% in Kosovo. Importantly, in Bosnia and Herzegovina and Kosovo, coal represents a higher percentage of employment compared to coal-dependent Poland, where the share stands at 0.7%.

Presence of outdated plants with inadequate air filtration control and wastewater treatment systems are other challenge to the transition. Emissions of pollutants from large power plants in most WB countries exceed prescribed limit values and negatively impact the health and life quality of people. An estimated 4,000 people die prematurely each year in Albania, 5,900 in BiH, 900 in Montenegro, 3,400 in North Macedonia, 2,800 in Kosovo, and 11,400 in Serbia due to exposure to air pollution. The majority of these deaths (80-90%) are attributed to cardiovascular diseases, with 50-70% of the deceased being individuals of working age (European Fund for the Balkans, 2022).

While the WB face challenge, they also possess capacities and resources that can be leveraged. One of the important capacities lies in its rich biodiversity. Forests cover a big portion of WB (28% in Albania, 44.7 % in Kosovo) (Climate ADAPT, 2016), and serve as carbon sinks, which in addition to economic and energy profits, is valuable asset in GT.

Renewable energy potential is another aspect, particularly with resources, such as solar, wind, and hydropower. Currently, the majority of renewable energy in the WB is derived from large hydropower plants, while wind, solar, and geothermal sources all together contribute less than 1% to the total renewable energy output (Climate ADAPT, 2016). Albania, the western part of Macedonia, and Montenegro possess high solar energy potential, receiving between 1650-1800 kWh/m². The existing infrastructure for hydropower generation in the region provides an additional opportunity.

Green Agenda for the WB

SECTION 2.2

2.2.1 Emergence of agenda and overview

Following periods in the 1990s, characterized by complex political and social developments - often referred to as the “transition,” the WB now stands at the intersection of environmental challenges and the sustainable development. The region’s future path is largely catalyzed by the stipulations set forth by the EU. These requirements serve as a gateway for countries within the region, initially as candidates and ultimately as full-fledged members of the Union. The journey unfolds through the framework of the EGD and the newly emerged Agenda for the WB, which aligns with the objectives outlined in the EGD. Agenda, specifically tailored for the region, was officially approved during the WB Sofia Summit in 2020. The strategy aims to address environmental issues, foster economic growth, and promote social well-being within the region.

2.2.1.1 Objectives

The primary objective of the Agenda is to attain carbon neutrality by the year 2050, aligned with the key elements of the EGD. At the core of the Green Agenda are five objectives that reflect the region’s commitment to mitigating climate change, preserving biodiversity, and ensuring the responsible use of natural resources. Those objectives emerge as pillars and encompass: cleaning energy sources & protecting the climate, Moving to a circular economy, depolluting air, water, and soil, building sustainable agriculture & food systems, protecting biodiversity and ecosystems.

Cleaning Energy Sources & Protecting the Climate

The first objective commits to mitigate climate impact and refers to cleaning energy sources & protecting the climate. It encompasses a spectrum of initiatives aimed at mitigating the effects of climate change and transitioning towards greener ener-

gy alternatives. One of the core initiatives are referring to Reduce GHG emissions and enhance resilience. Recognizing the region's vulnerability to climate change impacts, the Green Agenda attempts to mitigate emissions and also strengthen its resilience to a changing climate.

In pursuit of harmonization with EU environmental frameworks, the agenda is committed to aligning with the new EU Climate Law and participating in the EU Emissions Trading Scheme. Another key strategy is the implementation of quotas and carbon pricing mechanisms. This involves regulatory bodies imposing limitations or quotas on the volume of CO₂ emissions permissible for industries to release into the atmosphere. Companies are assigned specific emission allowances, and surpassing this allocation necessitates either emission reduction or the purchase of additional allowances. The latter further provides a financial impetus for companies to explore inventive strategies for diminishing their carbon footprint. While quotas set specific boundaries, carbon pricing is a market-based strategy that puts a monetary value on each ton of CO₂ emitted. It can be approached either with a *carbon tax* or *Cap-and-Trade (Emissions Trading System)*; the carbon tax places a direct tax on the emissions produced by industries, while the latter one sets an overall cap on the total amount of greenhouse gas emissions allowed within a specific jurisdiction and emission allowances are then distributed to companies (THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, 2023). This strategy proposes a market-driven approach to WB to reduce CO₂ emissions, encourages businesses to invest in cleaner technologies, adopt sustainable practices, while also providing flexibility in how they achieve emission reductions. The ultimate goal is to curb the release of GHG and contribute to the European effort to address climate change.

Additionally, the Agenda assists WB countries in the preparation of National Energy and Climate Plans, which would help to target sectors with highest emissions and energy saving potential. This could be essential in WB context, where coal is the major source of energy sector, constituting approximately 70% of the electricity produced. In certain countries, this dependence on coal is even more pronounced, reaching up to 97% (Bachev, 2023). Agenda also sets commitment to renewable and clean energy shifts by promoting the use of sustainable energy alternatives, decreasing its reliance on traditional sources, and diversifying the energy sector.

Furthermore, the transport sector is one of the main sources of GHG emissions (and NO_x emissions) in the region and with the energy sector, they contribute to two-thirds of the overall share of emissions. Recognizing its influence, the GAWB promotes an increase in rail capacity and the deployment of environmentally friendly transport modes, particularly in urban areas. This initiative aims to reduce the carbon footprint associated with transportation and foster smart mobility solutions that prioritize ecological solutions.

Moving to a Circular Economy

The principles of a circular economy is a pivotal objective within the GAWB. By redefining production and consumption patterns, the region strives to optimize resource use, minimize waste, and envision a regenerative and sustainable economic model. At the core of this objective is the commitment to transition from a linear economic model to a circular one. A key component of the initiative involves the development of strategies to improve the sustainability of raw material production. This approach prevents, reduces, recycles, and manages waste throughout the entire lifecycle of products. By reevaluating the traditional ‘take, make, dispose’ model, the region aims to create a closed-loop system that minimizes waste and optimizes resource use. Regarding recycling, the Agenda seeks to spearhead a regional agreement on the prevention of plastic pollution, with a particular focus on addressing marine litter.

Depolluting Air, Water, and Soil

Depollution of air, water, and soil aligns with EU standards by addressing environmental quality standards and modernization of monitoring systems. To fully pursue the objective, the region recognized the importance of accurate and real-time data. Consequently, the agenda places a strong emphasis on modernizing air and water monitoring systems, which involves an integration of technologies to enhance precision of environmental monitoring.

As the data has been shown previously, the wastewater management is the critical point to most of the WB countries, where it's poorly treated or isn't filtered at all. The Agenda acknowledges the impact of untreated wastewater on environmental health and aims to invest in wastewater management, as part of the depollution strategy. It implements modern and sustainable wastewater treatment practices that would help to safeguard water resources. Additionally, to address water scarcity and promote sustainable agricultural practices, the Green Agenda promotes water reuse in agriculture. This initiative encourages the efficient utilization of water resources by repurposing treated wastewater for agricultural irrigation, minimizing the demand on freshwater sources.

Building Sustainable Agriculture & Food Systems

Building sustainable agriculture and food systems within the GAWB is a holistic commitment that addresses rural development, food security, waste reduction, and the promotion of environmentally conscious farming practices.. A central focus of the objective is the development of sustainable rural areas. The Agenda recognizes the integral role rural communities play in agriculture and aims to implement strategies that enhance the economic, social, and environmental sustainability of these areas. This includes initiatives to diversify rural economies, support local industries, and improve living standards. Agenda also promotes environmentally friendly and organic farming methods, which involves the adoption of sustainable farming practices that prioritize soil health, biodiversity, and the responsible use of resources. Incentivizing organic farming seeks to reduce the environmental footprint of agriculture and enhance the ecological balance. In line with objective, emphasis is set

on increasing food security and quality. This involves measures to enhance agricultural productivity, improve distribution networks, and ensure access to nutritious and safe food. Moreover, a key aspect of the sustainability initiative is the reduction of waste in the agricultural and food sectors. GAWB aligns with EU standards, focusing on compliance with food safety and animal welfare regulations to minimize waste and ensure responsible production practices.

Protecting Biodiversity and Ecosystems

Considering the rich biodiversity of the region, GAWB is committed to protect biodiversity and ecosystems. Objective encompasses measures to preserve habitats, implement action plans, and facilitate information sharing. At the center of this objective is a dedication to safeguard the rich diversity of habitats and species. A key strategy involves the development and implementation of the Western Balkans 2030 Biodiversity Action Plan, which outlines specific goals, targets, and strategies for biodiversity conservation and serves as a roadmap for the protection of region's natural heritage. In conjunction with this, a Forest Landscape Restoration Plan is designed to address issues of deforestation stemming from 90s', habitat degradation, and ecosystem restoration. Lastly, recognizing the importance of data and information in informed decision-making, the Green Agenda explores options for establishing a Western Balkans Biodiversity Information Hub, which would serve as a centralized platform for collecting, sharing, and disseminating information related to biodiversity, facilitating collaboration, research, and the implementation of effective conservation strategies across the region.

2.2.1.2 Overview of roadmap & actions

After the GAWB approval, the subsequent stage was the development of the *GAWB Action Plan*, which was approved at the Brdo Summit in October 2021 (Regional Cooperation Council, 2023). Action plan involves identifying specific steps and supporting organizations, along with defining an indicative timeframe for the implementation of each measure. It serves as the framework to coordinate and support the proper implementation of these measures and provides a structure for the monitoring progress. The Action Plan (Regional Cooperation Council, 2021) is aligned with 7 components outlined in the Sofia Declaration (Climate Action, Energy, Transport, Circular Economy, Pollution, Sustainable Agriculture, and Nature and Biodiversity Protection), which later are grouped into 5 pillars (including decarbonisation, circular Economy, depollution, sustainable agriculture and protection of nature and biodiversity). It includes measures to achieve the 58 objectives. Each measure has a defined timeframe for implementation, assigned regional coordinators and relevant organizations involved in specific objectives.

Decarbonisation

The plan for decarbonization of WB includes coordinated actions for mitigating

climate change impacts. Decarbonisation pillar has the most actions, compared to other remaining pillars. Actions are distributed along short term and long term timeframes, with many of them being ongoing. Guided primarily by the Regional Cooperation Council (RCC), these actions span diverse sectors, from aligning with European Union climate goals to improving energy efficiency, renewable energy adoption, and sustainable mobility. They are ranging from legislative changes and energy efficiency to transportation infrastructure and alternative fuels development. Observation shows that one thirds of the actions are distributed for the short term period (2021-2022) and includes initiatives such as developing and implement integrated energy and Climate Plans, preparing an assessment of the socio-economic impact of decarbonisation, gradually phasing out coal subsidies and infrastructure projects regarding the railway and road safety.

Another $\frac{1}{3}$ of actions are distributed for the upcoming years (2023-2025) and include the aligning phase with the EU Climate Law and Emissions Trading System, implementation phase refers to infrastructural projects for Rail Reforms, Regional Transport Facilitation Action Plan, and Road Action Plan. Additionally, there are 6 actions that have a need to be continuously improved before 2030, including supporting renovation schemes, increasing renewables, developing smart transport infrastructure and so on. The RCC and EnCS are often involved in coordinating actions, which pinpoints to a collaborations between regional and energy-focused entities.

Circular economy

Under the circular economy, actions are ranging from improving the sustainability of raw material production to addressing plastic pollution. Initiatives include emphasizing circular economy strategies, waste management infrastructure, and the promotion of environmentally conscious practices. The RCC is a key coordinator for most actions, with time frames ranging from 2022-2030. However most actions are either ongoing or are going to happen before 2025. They refer to maintaining waste management infrastructure, implementing Smart Specialisation Strategies and applying the industrial ecosystem approach.

Depollution

Depollution actions are mainly focusing on initiatives to combat air, water, and soil pollution. Coordinated by the RCC and other key entities, these actions span a range of environmental domains, from transboundary air pollution agreements to circular economy strategies. The timeline for implementation varies, yet continuous improvement and long-term initiatives are dominating. Observation shows that most actions are envisaged for the near term before 2025 and refer to transboundary air pollution, establishing air quality monitoring system, integrating soil protection in various policy areas and implementing regional agreements regarding the transboundary air and water pollution. There are 3 actions that need to be implemented within 2025-2030, mainly referring to implementing Air Quality Strategies and EU water-related acquis.

Two actions regarding the modernizing and building necessary water monitoring and treatment infrastructure, are designed with a focus on continuous improvement beyond 2030. However, there aren't any timeframes and actions before 2023.

Sustainable agriculture

The table is coordinated by the Stability Pact for Southeast Europe Regional Rural Development Standing Working Group (SWG RRD). Initiatives include transforming agri-food sector, aligning with EU standards on food safety, promoting organic farming and reducing synthetic chemicals. There aren't any actions scheduled before 2025, they are scheduled after 2026 and require continuous implementation. As for example: aligning with EU food safety standards, addressing animal health, strengthening sanitary controls, promoting organic farming, cooperation with science and business sectors, and implementing LEADER.

Protection of nature and biodiversity

Actions are coordinated by the International Union for Conservation of Nature (IUCN) and the RCC and span a diverse array of initiatives, ranging from the development of strategic plans to the restoration frameworks. Most actions are scheduled from 2021 year to beyond, and can be grouped according to short term (1 year), medium term (2-3 years) and long term (more than 3 years) actions. There are an equal number of short and medium term actions. Some short term actions include developing reports regarding the WB Biodiversity and its linkage to climate change, preparing assessment reports and developing ecosystem connectivity. While the medium term actions are shifting towards the preparation phases to protection and restoration plans, Forest Landscape Restoration Plan and monitoring the biodiversity. There are only 3 long term actions, mainly focused on implementation phases; it refers to the implementation process of WB 2030 Biodiversity Strategic Plan and Forest Landscape Restoration Plan. Even though the most action's timeframe is before 2024, there are many of them that require continuous implementation.

2.2.1.3 Financing and support mechanisms

To facilitate abovementioned actions funds need be mobilized at all levels. Upon examination of financial instruments (Commission Staff, 2020), they can be classified into 3 tiers: international, regional, and national levels (*Figure 9*).

At international level, three primary financial sources to be discussed are the *Multi-annual Financial Framework (MFF)*, financial assistance from the EU Commission and member states, and funds from beneficiary parties. Among these, the major financial instrument is the MFF, which includes 2 core initiatives - the *IPA* and the *External Investment Plan*. Within the IPA, mechanisms such as IPARD and IPA III are pivotal financial instruments. IPA III include applications in environmental protection, energy efficiency, and renewable energy sources. IPARD primarily focuses on rural and

agricultural reforms and the development of sustainable food production chains.

In External Investment Plan two major initiatives are prominent: the *Green Window* and the *Natural Capital Investment Fund*. Both prioritize projects that have a positive impact on the economy, ecology, environment, and communities. Furthermore, important source of financing comes from funds allocated by the EU Commission and member states. Within this category, *Innov Financial Instruments* concentrate on projects related to research and innovation, while the *Western Balkans Guarantee Facility (EFSD+)* supports initiatives regarding the environment, recycling, energy sector, and municipal infrastructure. Lastly, from the funds allocated by beneficiary parties, include international financial institutions, such as the *European Investment Bank*, and Public-Private Partnerships, like the *Green for Growth Fund (GGF)*.

Transitioning to the regional level, five major financial instruments emerge, including the *Western Balkan Investment Framework (WBIF)*, *Regional Energy Efficiency Programme (REEP)*, *EU4Green*, *EU4Energy Transition*, and the *Economic and Investment Plan (EIP)*. The latter may also be considered at the national level. These tools focus on a range of topics, including renewables and energy efficiency, implementation of EU energy directives, transportation, climate protection, and other.

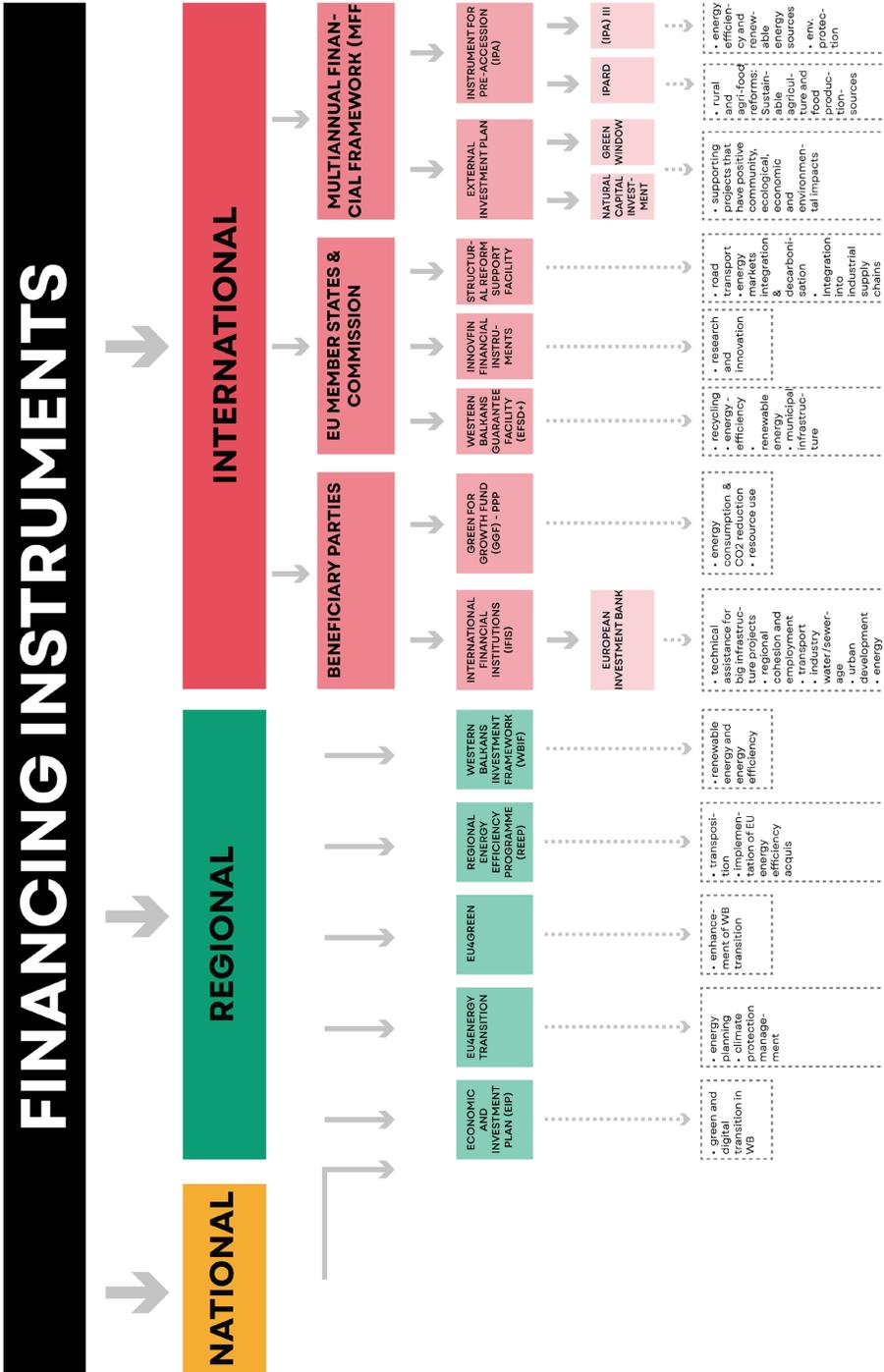


Figure 9: Available Financing tools for WB Green Transition

Implementation Challenges and Ongoing Progress

SECTION 2.3

2.3.1 Theoretical Framework for GT Challenges in the WB

Despite a big step forward of adopting the GAWB, obstacles are faced during the implementation of measures. Challenges are observed on every layer of societal, environmental, institutional, governmental, political, financial, and technical. Based on the Report on Western Balkans Just Green Transition Conceptualisation (Toto, et al, 2023), as well as identified from the interviews, implementation of green transition measures faces several interlinked challenges, that can be classified into several categories; the lack of political will along with institutional, structural, and financial constraints limits the implementation and acceleration of policies. On another side, the low societal preparedness and information sharing regarding the climate-related consequences and possible transition mechanisms, is also accounted as another challenge. They are deeply rooted in socio-economic context of the region and necessitate a comprehensive approach for implementation.

The WB have experienced rapid and externally influenced transformations from communist systems to market economies, driven primarily by the need to comply with international funding bodies' (such as World Bank, the EU funding) prerequisites and conditions. Transition has often been rigid and has not always been accompanied by the development of powerful institutions or governance structures. As a result, nowadays there is an observed **lack of institutional capacity** to effectively implement and manage GT measures. For instance, improving air quality requires reliable data and technical equipment, which are resources that are currently scarce in the region - both financially and technically. Moreover, frequent political and administrative changes are contextual events for the WB region that often dis-

rupt continuity and make it difficult to sustain long-term environmental strategies.

Regarding the **socio-economic factors**, the economic instability in the region plays a significant role in the challenges faced during GT. The Balkans experience a continuous "brain drain," where skilled professionals emigrate in search of better opportunities, leaving a gap in the necessary expertise to drive the GT process. Economic instability also influences governmental priorities, where immediate concerns like employment and economic growth overshadow long-term environmental goals. Implementing measures such as shutting down pollutive industries and transitioning to renewable energy sources requires larger investment, which can be a heavy burden for economies already facing other challenges related to covering the basic needs of society.

The **low societal preparedness** and information sharing is another core reason for challenges to arise. Mainly resulting in **low level of stakeholder engagement** in Green Transition measures and processes and the lack of trust. As synthesized from interviews, while asking to rate the stakeholder's involvement out of 5 points, the responses were very notably low (1 - 25% and 2 points - 75%) - being a critical barrier for GT implementation. Historically, the region's countries were centrally controlled, with little tradition of public or stakeholder engagement in governance processes. This lack of involvement is due partly to the weak legal and institutional frameworks that do not empower municipalities or local governments. Without active involvement from local stakeholders, including businesses, community leaders, and the general public, GT measures are less likely to be accepted or effectively implemented. However, as noted from the interviews, while there are efforts to involve stakeholders, they often fall short due to inadequate planning, unclear program objectives, and inappropriate targeting of stakeholders.

Specific and more articulated challenges, as derived from responses in an interview and the Report on WB Just Green Transition Conceptualisation, can be further broken down and analyzed within three core areas and the base theoretical introduction that was already provided.

2.3.1.1 Institutional & structural Limitations and Political Will

Regulatory and administrative gaps, as noted in interviews, is one among the challenges related to the core area of concern. Respondents emphasized the struggle to fully harmonize the WB legislation with the EU acquis, which is a fundamental aspect of aligning with GT standards. Despite nominal progress on paper (policy documents and reports), implementation is weak especially in areas of infrastructure development and cooperation between the WB and the EU.

Interviews also highlighted the *insufficient administrative capacities*, which are unable to handle the scale and complexity of GT initiatives. This challenge is compounded by a lack of sustained political will, both of which result in weak public institutions that fail to channel necessary reforms efficiently or adapt to new environmental requirements.

Moreover, the report on WB Just Green Transition Conceptualisation points out that current spatial planning reforms have not effectively incorporated JGT needs. They often fail to align with the holistic needs of a JGT, which shows a gap in planning instruments that are capable of addressing *environmental and social disparities*, especially in remote areas. Core reasons for that are less effective spatial planning, insufficient impact assessments, limited resources, poor data, and weak public institutions. Despite reforms, spatial planning still lacks the necessary tools to address inequalities and properly integrate Just Green Transition principles.

2.3.1.2 Socio-Economic Constraints

Interviews revealed that *access to adequate funding* remains a critical barrier, with a preference for grants over loans. It indicates a reluctance to increase debt burdens under uncertain economic conditions. However, this preference complicates the financial circumstances, as grants are often less readily available and more competitive than loan options. Securing funding and investment for these initiatives has been a critical focus, with strategies leveraging funds from EU projects and promoting Private-Public partnerships as highlighted in the interviews. However, challenges remain in accessing domestic funding and private sector investment. The need for the EU to include the WB in the Just Transition Fund scheme prior to EU accession has been emphasized for addressing the high costs associated with updating the region's outdated and coal-dependent energy systems.

Furthermore, the region also faces challenges in attracting private investments, which are important for implementing large-scale environmental and infrastructure projects. These challenges are primarily due to macro-regional disparities across the Balkans (for instance, some areas may be more economically stable and thus more attractive to investors, while others may struggle with less favorable economic conditions). Local specificities, such as varying regulatory frameworks, bureaucratic inefficiencies, or a lack of local expertise, also contribute to undermining *investor confidence and feasibility* of projects. These factors lead to a cautious investment climate where potential investors are hesitant to give funds without clear indications of potential returns and stability.

The report as well as interviews emphasize the need for *new skill sets* targeted at all community levels, especially the vulnerable groups, to support the transition. The availability of necessary skills and technical capacities required to drive the GT effectively is non-insufficient in WB. This shortfall spans various levels of the workforce and hinders the region's ability to implement relevant projects and policies. Similarly to the outdated skill sets, the report also points out the *limited awareness and use of new technologies*, coupled with insufficient funding and incentives for technological improvement. This restricts the region's ability to adopt innovative solutions that are crucial for the transition.

Lastly, the report sheds light on challenges associated with *economic dependencies and resource accessibility*, particularly in rural livelihoods, where due to decarbonization and restricted access to natural resources, people experience job losses.

2.3.1.3 Low Societal Preparedness and Stakeholder Engagement

Regarding the low societal preparedness and information sharing, as well as the low level of stakeholder engagement, several challenges were noted during the interviews. Among them, the root of the problem is connected to the *public understanding and acceptance of the GT process*. There's a gap in the understanding of what the EGD entails, which impacts the public acceptance and support for transition initiatives. This calls for transparency, knowledge sharing, and inclusiveness in decision-making processes to gain community support. The report also indicates that stakeholder involvement is weak due to *inadequate engagement strategies* to integrate civil society into the transition process. This is compounded by a lack of dialogue spaces and collaborative platforms that could bridge diverse viewpoints on priorities and challenges.

2.3.2 Implementation challenges of GAWB pillars

Challenges in implementing the GAWB are primarily due to a lack of comprehensive policy frameworks and the necessary legislative groundwork. North Macedonia stands out as the only country in the region to have drafted a National Energy and Climate Plan (NECP) that includes a JT program. However, the rest of the region lacks integrated policies that fully adopt EU legislative principles. Focusing on the implementation challenges of separate thematic pillars (biodiversity, depollution, agriculture and food security, decarbonization and circular economy), several points can be made based on the Report on WB Just Green Transition Conceptualisation.

For instance, the Carbon Neutrality concept is relatively nascent in the WB's policy environments. Most countries still rely on coal, with limited use of renewable energy sources (like hydropower in Albania). In a circular economy pillar, there's a gap in governmental support for transitioning from linear to circular economic models. Despite the private sector showing some initiative, there is a lack of supportive policies and incentives for waste management and business model transformation towards circularity on a state level. In terms of pollution control, the WB still faces issues in air, soil, and water. Moreover, there are outdated practices and technologies in the agricultural sector that result in lower productivity. Some support was observed in rural areas, yet there's a need for reinforced sectoral sustainability reforms. Lastly, for biodiversity conservation, awareness raising and actual implementation of preservation strategies, aligned with ones of EU's, are required.

In conclusion, the GT in the WB requires a shift from traditional commitments to actionable and impactful policy implementations. This shift necessitates reinforced legislative frameworks, bigger investments, and active stakeholder engagement to ensure the region can meet its environmental goals and align more closely with EU standards. Moving forward, it is imperative to ensure that policies not only exist but are also implemented and adequately funded to achieve lasting improvements.

2.3.3 Assessment of Ongoing Progress and Achievements

Drawing from the Report from the GreenFORCE project and interviews with stakeholders, it's evident that while progress is underway, yet challenges and opportunities lie ahead. The GAWB has been integrated into regional policies, with the key areas of focus including the decarbonization of the energy sector, protecting biodiversity, and transitioning to circular economic models. However, it's important to understand why certain initiatives have been particularly successful for the region. These successes, though still developing, will be important to highlight the elements that contribute to the effective implementation of practices.

Several policy frameworks and models have shown potential, though many are still in their early stages. The interviews highlighted that North Macedonia is pioneering in this aspect by *developing a Just Transition Road-map* particularly focused on energy sector decarbonization. This model highlights the region's early efforts in conceptualizing transition strategies that are adapted to local needs and circumstances. This approach underscores the importance of customizing transition strategies to fit the specific socio-economic and environmental contexts of each region. However, as noted in the interviews, it's too early to measure concrete outputs and outcomes from this initiative, and its eventual success remains to be seen.

Another notable achievement is the region's approach to biodiversity protection, which, according to interview responses, has seen clearer target setting and more successful policy implementation compared to other areas. These policies have featured preventive and restrictive measures that do not necessitate constant behavioral changes or upskilling, which often are barriers to the implementation phase. This approach has allowed for more straightforward implementation and compliance, and set a standard for other sectors.

When it comes to *supporting vulnerable groups and mitigating negative socio-economic impacts*, the strategies integrated within climate action and energy plans often include sections dedicated to environmental and social impact. According to interviewees, they often lack detailed cost-benefit analyses which could strengthen their effectiveness and assess the real impact on vulnerable groups. Various donor-funded projects from entities such as the EU, UN, and GIZ have been aiming to fill this gap by supporting green businesses and providing job training and skills development, to ensure that the transition also supports economic diversification and job creation. A relatively successful example of this is Albania, where employment and skills strategies are being reformed to support those most affected by the transition.

From the report's perspective as well as from the interviews, the *conceptualization of GT* in the WB is recognized as an ongoing process. However, specific regional adaptations are still required to address local conditions. The report emphasizes the need for a thorough understanding of the theoretical underpinnings of GT to better tailor these concepts to the regional context. It highlights that the territorial particularities

of the WB must be considered to ensure that the transition strategies are effectively localized and implemented. For this, according to the report, public acceptance, engagement, and the reform of institutional and governance structures are key.

In conclusion, both the interviews and the report emphasize the early stages of GT, and recognize the important groundwork laid down through policy frameworks and the need for continued adaptation to local contexts. Transition offers increased opportunities for societal development, including new research avenues for academia, improved cooperation within civil society, and the potential for environmental and economic benefits. However, to realize these benefits, the WB must continue to refine their policies, identify clear and direct policy targets, localize transition strategies to meet specific regional needs, design support mechanisms for vulnerable groups, commit to strong institutional frameworks, improve stakeholder engagement, and secure necessary funding and investments, to ensure that the transition is both just and effective for all community members. As these processes unfold, continuous monitoring and adaptation of strategies will be crucial to address upcoming challenges and to control the opportunities presented by a GT.

03

**EASTERN
PARTNERSHIP**

OVERVIEW

This chapter examines the EaP's state for the green transition, focusing on the interplay between environmental policies, challenges of implementing sustainable practices, and the support mechanisms in place. It begins with an exploration of the EaP's context, outlining the historical backdrop, political and socio-economic dynamics, and their implications for environmental strategies. The narrative then transitions to an overview of the current environmental landscape, discussing critical issues like climate change projections, air and water quality, land use, and waste management across the EaP countries.

The chapter also outlines the progress in adopting and implementing green policies and practices, and highlights the alignment with the EU Agenda through policy agreements and incentives. It overviews the financing and support mechanisms at various levels of international, regional, and national. The discussion extends to the environmental, administrative, technological, and capacity constraints that the EaP faces, and sheds the light on the challenges hindering the region's green transition.

NAVIGATION THROUGH THE CHAPTER

3.1

*Context of
EaP*

3.2

*Environmental
Landscape*

3.3

*Green Ttransi-
tion in EaP*

Context of EaP

SECTION 3.1

As already stated, the European Union with the European Neighbourhood Policy (ENP) tool governs its relations with closest neighbors in the South and East regions (European Union - External Action, 2021). The policy was initiated in 2004 to achieve mutual commitments, with a priority on environmental challenges among neighbors and the EU region. Subsequently, in 2008, recognizing the need for enhanced collaboration with Eastern neighbors, the European Council took decisive action by introducing the EaP, and provided a more specific dimension to the existing policy framework. The strategic framework gained urgency due to the conflict among Georgia and Russia in August 2008, when the EU saw the necessity to establish a new coherent policy framework that would allow it to mutually reinforce its ties with its Eastern neighborhood. Consequently, in 2009, a new joint policy framework of EaP was launched in between of the EU, its members and the six South Caucasus partner countries of Armenia, Azerbaijan, Georgia and Eastern European countries of the Republic of Moldova¹, Belarus and Ukraine (*Figure 10*).

The main objective of the partnership is to accelerate the “*Security, stability and prosperity, democracy and rule of law*” (European Union, 2008). The priority is given to common environmental challenges posed by climate change. Therefore, the delivery of global policy frameworks, such as the UN 2030 Agenda and its SDGs, the Paris Agreement on Climate Change, as well as the EGD, are supported under the EaP.

3.1.1 Overview of political & socio-economic context - transition and its impacts

While acknowledging the strategic structure of the Partnership, it's important to address those six countries contextually, mirroring the approach taken with the WB

¹ Later referred as Moldova

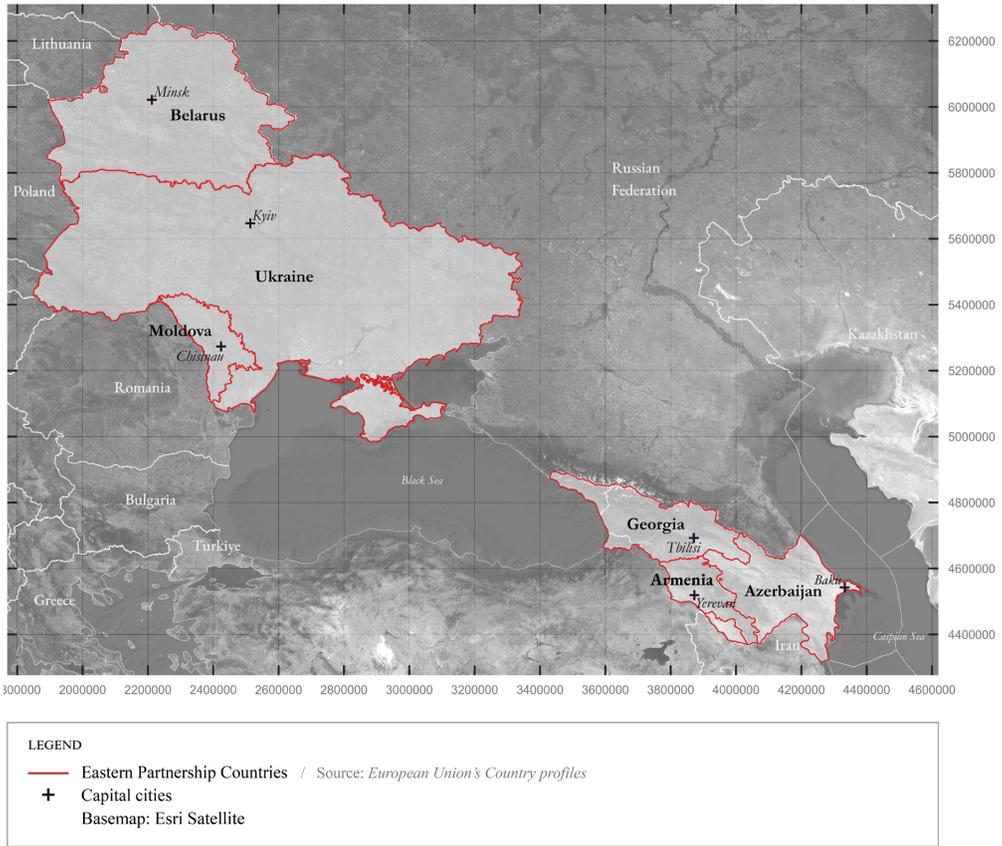


Figure 10: Eastern Partnership Countries

states. A contextual understanding of the Eastern neighborhood unveils a shared, the most recent history, predominantly shaped by the Soviet past. The complexity of recent history arises from intricate political, ethnic, and social developments that have shaped its present-day dynamics and it is primarily rooted in the early 1990s. Gorbachev’s efforts of glasnost and “perestroika”, accompanied by the continuous control, fueled the rise of nationalist sentiments. It energized the independence of many EaP countries and pushed them out of the central states, even before the Soviet Union fell apart (Curtis, 1995). Yet, the process of reclaiming independence from the central authorities wasn’t peaceful either for South Caucasus countries, nor for East Europe.

Dividing the six EaP countries into two groups would help to facilitate a better evaluation of post-Soviet challenges. Geographically proximate regions often encountered similar challenges and, in some instances, became engaged in mutual conflicts. Therefore, this chapter will categorize the six countries into the Caucasus and

Eastern Europe Regions.

SOUTH CAUCASUS COUNTRIES

Following the dissolution of the Soviet Union, the three countries in the South Caucasus region – Armenia, Azerbaijan, and Georgia – have undergone challenging political, economic, and social transformations, including violent conflicts, population displacements, authoritarian political regimes, and the destabilization of economic and state structures (Alessandro Coppola, 2017).

ARMENIA

The fall of communism – first years of independence

In Armenia, attempts to break up from the Soviet union started earlier than in the Baltic States and Georgia. In the late 80's the “Karabakh Committee” centered around the demand for the reunification of Nagorno-Karabakh with Armenia, which at that time was part of Soviet Azerbaijan (Panossian, n.d.). The movement turned into a mass public movement, supported by the Armenian population. Requests for autonomy from the Nagorno-Karabakh side fueled a sense of national awakening. Following several attempts to break up from the Union, Armenia eventually succeeded after two years and in 1991 declared full independence from the Soviet Union.

The first post-communism years came up challenging for Armenia. It faced challenges to establish new political and economic structures. The majority of the population gained ownership over the real estate and common lands became the subject of poorly-managed open spaces. During the early sovereignty years, Armenian diaspora (more than 7 mil. People resided outside of Armenia) played an important role by supporting flagship projects. Even though their involvement was tangible in the architectural sphere, it wasn't sufficient for changes into policy areas and improvement of physical spaces (Petrosyan, et al., 2016). Land allocation and the process of permit granting wasn't transparent which resulted in non-regulated constructions.

Shift to market economy

Early 2000s wasn't exception for finding peace to resolve the Nagorno-Karabakh conflict. Periodical conflicts eventually culminated by the “velvet revolution” in April 2018 (Shougarian, 2019), which brought political reforms accompanied by a reinforced shift to market economy. Regarding the urban reconstructions in Armenian market economy era, they was influenced by factors beyond the transition. The 1988 earthquake disaster in Spitak, demolished over 360 settlements (Petrosyan, et al., 2016). The government launched big-scale reconstruction projects (Northern Avenue, Main Avenues) with stricter codes that aimed to mimic Armenia's nationalism. Most projects ended up being a space for gentrification and criticism from the public side.

AZERBAIJAN

The fall of communism – first years of independence

Similar to Armenia, Nagorno-Karabakh's reunification attempts with Armenia, led to tensions and, eventually, the conflict. Along with newly awakened nationalism, the Azerbaijani Supreme Soviet passed a resolution declaring sovereignty in 1989. Despite the first failed attempt of autonomy, along with other Soviet republics, Azerbaijan declared independence on October 18, 1991. Two years later the first president, Heydar Aliyev was elected, who continually put effort to stabilize and strengthen Azerbaijani's international standing.

shift to market economy

The most vivid manifestation of the Post-Soviet development in Azerbaijani was an oil boom, led by the Aliev dynasty. Azerbaijan, with oil reserves far surpassing its domestic needs, had to depend on a blend of pipelines, rail, and shipping to export oil to global markets. Consequently, in 2003, the Baku-Tbilisi-Ceyhan (BTC) pipeline construction was launched, which was linked to Azerbaijan's economic growth, highly contributing to the GDP growth. The (World Bank, 2022) data shows that during the initial years of independence, the GDP experienced a decline of -23.1%. Despite a modest improvement in the 2000s, the level reached a peak right after the pipeline construction, surging to 34.5% in 2005.

For the past 30 years, with the influx of oil revenues, increasing demographic trends and migration towards the capital, pushed the Azerbaijani government to invest billions of dollars in diverse projects. There's no doubt that most of the investments were redirected in the capital city, which was dominantly incorporated in the country's promotion strategy. Dubai model emerged as an appealing benchmark for the Baku reconstruction. Investment concentration, along with internal migration in the capital, fueled large-scale construction projects and gentrification in Baku. For now the country's economy struggles with diversification, as its economy mainly relies on oil commodities.

GEORGIA

The fall of communism – first years of independence

Initial years of Georgian independence was accompanied by tensions with ethnic minorities. As a result of civil tragedy, dedicated to sovereignty, the opposition strategically organized strikes to emancipate themselves from communist authority. This ultimately resulted in the separation from the Soviet Union. However, breaking up from the central system wasn't the only struggle for Georgia. The separation of autonomous units of South Ossetia and Abkhazia added further problems to post-Soviet governments. Both conflicts lasted throughout 1991-93, causing several thousands lost lives and refugee displacement across Georgia (Alexandros, 2008).

After the larger-scale open warfares, urbanization rates dropped in Georgia. It was a result of mass out-migration of population and decrease of natural growth. Over a couple of decades, many settlements struggled to find new economic bases to build the development on, and make their urban structures more attractive for investments (David Gogishvili, 2018).

While it terms of environmental concerns, the war in Abkhazia damage to the ecological habitats unique to that region. In other respects, experts considered Georgia's environmental problems less serious than those of more industrialized former Soviet republics. Solving Georgia's environmental problems was not a high priority of the national government in the post-Soviet years.

New revolution and shift to market economy

Georgia's political landscape didn't remain still for a long time. In 2003, a common demand for democratic reforms resulted in a sequence of political and civil peaceful protests known as "The Rose Revolution. The movement was led by the former President Mikheil Saakashvili and became a turning point in Georgian politics. Saakashvili was a pro-Western politician whose rule was characterized by efforts to implement democratic reforms, combat corruption, shift to market economy and strengthen ties with Europe and the West.

Looking at the recent past of Georgia, it's possible to identify several major trends that characterized the era of shifting to the market economy. Similar to the most post-soviet countries, Georgia underwent economic, political and social transitions to capitalism that strongly influenced urbanization and ecological aspects. According to (David Gogishvili, 2018), among the all six EaP countries, Georgia implemented the highest degree of free-market liberalism through its reforms, which was accompanied by the typical features of a mass privatization of land, real estate, and other economic assets. The massive privatization of state assets brought about the changes of urban areas, compromising public green spaces through land allocation. The housing development emerged as the primary catalyst for spatial expansion in urban areas and as a territorial sprawl in peripheries. Uncontrolled and mass-building lead to some severe ecological problems mainly in the cities. Housing boom led to shrinkage of green, open and public areas, led the low resilience of urban and natural areas and their exposure to environmental disasters.

Conclusion for Caucasus Region

Observing the evolution of South Caucasus countries after the collapse of the Soviet Union reveals two distinct periods: the early years of independence and the transition period. Both epochs have presented, and continue to bring, time-specific and diverse impacts to these regions. Examining the period from the early independence years, which lasted till late 90s, reveals the biggest common feature for those countries expressed by the process of transition from centrally planned economies to market economies. This process encompassed handing over the previously-owned state land and assets to individual bodies and to citizens. The privatization process revealed the unpreparedness of the institutional bodies and planning frameworks, accompanied by the corruption and informality. The most tangible effects of the privatization process was the modification and emergence of new urban structures, mainly in the core cities of the region.

The subsequent phase steams from the beginning of 2000s, which for most of the countries appeared to be the new political era, that brought a relative stabilization of economic and political spheres. This era was characterized by large-scale developments, flagship and reconstruction projects to rebrand major cities and find a place in an international space. Such ambitious projects were mainly the root of gentrification, displacement of people, shortage of affordable housing and modification of traditional urban space.

EAST EUROPEAN COUNTRIES

BELARUS

The fall of communism – first years of independence

Fall of communism in Belarus was mainly ruled by the central elite rather than the civil movement, opposed to caucasus cases. Despite the emergence of small civil movements, it wasn't sufficient for the country's deliberation; Only in 1991, based on Belavezha Accords, Russia, Ukraine and Belarus finally became independent states (Mantchev, 2016) .

The initial years of independence placed a pressure on Belarus, given the mature nature of its system that was not well-suited for such changes. Since that time Belarus had reduction in major emission sources. This decrease was not only reflective of decreased economic output, but also result of adopted initiatives, including introduction of waste disposal plants, and sewage and water treatment systems (OECD, 1997). Despite the progress seen in emission reduction, Belarus still faces environmental challenges related to the Chernobyl power plant explosion. As a legacy of the Soviet past, Belarus has contamination from industrial plants that are affecting drinking water supplies and agricultural fields. In the residential (housing) sector, the high energy consumption aspect still stands as the most challenging issue. Most of the housing stock (more than 60%) was built before the soviet collapse with a high energy consumption rate (230kWh/m²). This issue remains unresolved in modern buildings as well, with around 130kWh/m² energy consumption (UNECE, 2019).

Shift to market economy

The following two decades were dominated by Lukashenko, whose presidency faced criticism for its authoritarian governance style. Civilian protests towards Lukashenko, were brutally suppressed by the authorities. Nevertheless, the ties between Russia and Belarus have deepened both economically and politically. Despite the periodic tensions with Russia, Belarus has been dependent on imported energy supplies and assistance from Russia. Nowadays the major source of Belarus' economy is the industry (accounting for 23% of the country's total employment), transportation, agriculture, construction and trade (UNECE, 2019). Despite industry remaining a major force in the Belarusian economy even after the collapse of the Soviet Union, the country still lacks new elements to innovation, investment, and technology.

MOLDOVA

The fall of communism – first years of independence

In Moldova, in contrast to Belarus, opposition political movements were already existing. In August 1991, Moldova officially declared its sovereignty from the Soviet Union. The price of the independence was followed by tensions with the Transnistria region, which displaced hundreds of people and granted Transnistria de facto independent status (CSCE Conflict Prevention Centre, 1994).

Moldova faced economic difficulties in the early years of independence. Challenges mirrored the issues with Transdniestrian conflict and the trade shock during the switch to a market economy. Moldovan export was mainly dependent on agricultural products, which was subsidized with energy in return. After independence, Moldova lost access to the export market and faced increased energy import costs from Russia. Increased energy prices and poverty, especially in rural areas, challenged the forest areas. Illegal logging still exists as one of the main challenges in Moldova, which causes important losses yearly² (World Bank, Environment and Natural Resources Practice, 2016). The air quality, much like in Caucasus countries, is a challenge in Moldova. Pollution, particularly in urban areas, is primarily attributed to the import of second-hand vehicles and use of low quality fuel. According to (WHO, 2022), the cost of death resulting from air pollution peaked at 23.5% in 2010 (the highest in the EU).

Shift to market economy

To recover from the shock and stabilize its economy, in the mid-1990s, the government launched land privatization and economic reforms to attract foreign investments. As a result, state-owned assets, including the collective farms, services, manufacturing and industry, were privatized to individuals (Stuart Hensel, 2004). Despite these efforts, they have not yielded tangible improvements for Moldovans. The early years of transition until 2005, become characterized by re-urbanization and population decline in urban areas (Mesmerizing Moldova, 2004). Mass privatization brought about some negative consequences of land degradation and abandonment, that amplified the poverty increase. Challenges appeared in urban developments as well, where the absence of general plans gave birth to “illegal buildings”. Meantime existing housing stock, due to inadequate fundings, gradually began to decay. The pressure was increased on technical aspects of heating, water and waste management that eventually doubled solid waste after the 2000s.

UKRAINE

The first years of independence

Much like other post-soviet countries, Gorbachov’s attempts to ease the soviet rule,

² officially recorded timber harvest being approximately 400,000 – 500,000 m³ per year in Moldova

triggered awakenings in many countries. In 1990, communist party's monopoly was defeated, and despite other attempts of union treaties, Ukraine declared full independence from the Soviet union in 1991 (Britanica, n.d.). Contrary to the successful steps, Ukraine faced some issues in the economy and development fields. Nation's economy was mainly led by energy and pollution intensive industries (OECD, 2022). Inherited industries, predominantly the metallurgical and mining sectors, had outdated infrastructure with improper filtration mechanisms, which become the primary reason for water and air contamination. Moreover, similar to Belarus, Ukraine's economy was highly dependent on imported energy supplies, which gave a sharp rise in energy costs. It was accompanied with an inflation rate (4,735% in 1993) and corruption practically in all aspects of governance. Carbon intensive industries and import of second hand vehicles became major sources of air contamination. Population became exposed to the consequences, and Ukraine found itself in one of the leading positions among OECD countries in mortality attributed to air contamination (WHO, 2015).

Shift to market economy

The early 2000s and the transition period was marked by political excisement. The country's political trajectory was aligned with a civil desire to transit towards the pro-European side, which eventually culminated by the Orange Revolution in 2004. Despite the resistance, the following leaned towards a Pro-Russian era for Ukraine, under the leadership of Viktor Yanukovych. His decision to suspend an association agreement with the EU, was the last step that triggered mass protests also known as the Euromaidan movement. The end result of the protests was a revolution in 2014, which helped the country to move closer to Europe. The year 2014 appeared to be the turning point for Ukraine, as it signed an Association Agreement (AA) and once more reaffirmed its commitment to EU integration. Only after that Ukraine took realistic steps to tackle environmental challenges, most of which were granted from the soviet past. The EU integration factor added further obligations to its commitment. New projects such as closure of mining plants, improving building's energy efficiency, and reducing subsidies for environmentally harmful fossil fuels, have launched all over the country.

CONCLUSION FOR EAST EUROPE

Similar to the South Caucasus countries, the collapse of the Soviet Union unfolded two distinct periods for three East European countries - the early years of independence and the transition period. The initial phase was characterized by privatization of state-owned assets, often led with corruption and informality. All three countries shared the burden of a Soviet industrial legacy, containing carbon intensive industries and outdated technologies that led to water and air contamination. Import of aged vehicles and outdated transportation systems added further issues to air quality. The subsequent phase, steaming from the beginning of 2000s, appeared as a decisive political era for most of these countries. The period was characterized by the investments influx that brought about new forms of development.

CONCLUSIONS - THE DECISIVE CHOICE

Summarizing the EaP's political and socio-economic dynamics and their environmental outcomes in a timeframe of '90-2000s, a commonality becomes apparent. After the Soviet Union's fall, an economic, political, and cultural shift towards capitalism, left tangible imprints on them. This shift is evident in changing urban forms, resource exploitation, environmental impact, and the perceptions of the people. The subsequent phase, post-2000s, also considered as a transition period, countries began to witness the outcomes of mass privatizations, deregulation, and an influx of investments. However, the transition is not yet fully facilitated, and these countries are still grappling with post-communist transformation and processes associated to it.

However, there has been a gradual shift in their aspirations towards pro-European or Russian forces, which marked the most recent era. These countries found themselves at a crossroad and faced decisive choices due to external pressures. From 2014, the split emerged within the EaP. On one side, there was the group of countries that had signed the Association Agreement (AA) and the Deep and Comprehensive Free Trade Area (DCFTA) – Georgia, Moldova, and Ukraine. On the other side were the remaining three countries – Armenia, Azerbaijan, and Belarus (Stefan Batory Foundation, (FriedrichEbert-Stiftung, 2016). In the case of Georgia, Moldova and Ukraine this choice was taken right after the Ukrainian revolution. By signing the agreements, they reinforced their direction towards the EU and by 2023 all 3 countries were granted EU candidate status. While the remaining countries - Azerbaijan, Armenia and Belarus, chose the opposite path to EU integration. Belarus and Armenia reunited in the Eurasian Economic Union, led by Russia. Additionally, in 2021, Belarus suspended its participation in the EaP.

Division among the six EaP countries had split into two groups. Based on observations and scholarly perspectives, this split was predictable even in the initial years of the partnership's establishment. Azerbaijan and Belarus had relatively more autocratic regimes since gaining independence, with Belarus mainly being led by pro-Russian forces. Conversely, Moldova, Ukraine, and Georgia managed to distance themselves from authoritarian forces. Armenia, while positioned between these two forces, aligns closer to Azerbaijan than the pro-European side.

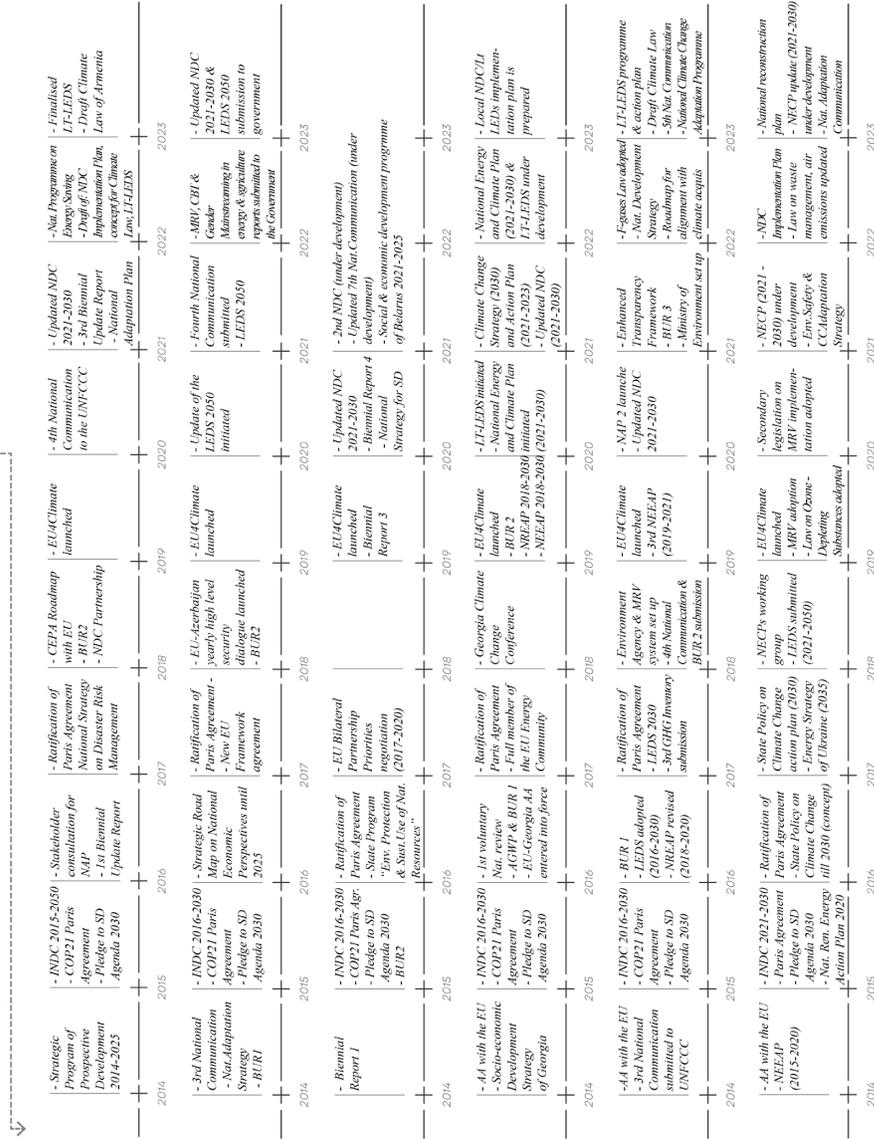
Nevertheless the split poses a threat, the partnership still remains as a tool to manage relationships between these six countries with varied attitudes. Before addressing specific issues or providing recommendations for smoother transition, it's important to understand how the post-Soviet legacy and transition period have influenced and continue to shape environmental perspectives. The dynamic interaction between historical contexts and current objectives appears as a framework through which we can grasp the challenges and opportunities in the pursuit of sustainability.

EASTERN PARTNERSHIP

PERIOD

FIRST YEARS OF INDEPENDENCE TRANSITION POLITICAL SPLIT EU INTEGRATION EU GREEN DEAL

CLIMATE POLICY DEVELOPMENT & COOPERATION DEVELOPMENT WITH EU



Source: EU4Climate

Figure 11: EaP Climate Policy & Cooperation Development with EU

Environmental Landscape

SECTION 3.2

This section overviews the current environmental landscape of EaP countries, examines estimated consequences of the ongoing conflict in Ukraine and its potential impacts on the GT. It concludes with an analysis of the common environmental challenges shared between EaP and the EU.

However, before analyzing individual aspects of environmental challenges, it is important to examine GHG emissions and the EaP countries' contributions to them. To this end, two data categories were analyzed for the EU-27 and EaP countries, corresponding to the year 2021: total GHG emissions and emissions per million dollars of GDP. The total GHG emissions, measured in million tons of CO₂ equivalents reveal an uneven scenario between the EaP countries and the EU (*Figure 11*). On one hand, smaller countries such as Armenia, Georgia, and Moldova are positioned towards the lower end of the scale with the least total emissions, while larger countries like Ukraine and Belarus are ranked closer to the highest EU emitters. However, this represents just one facet of the analysis. It is hardly surprising that nations with comparatively smaller territories and economies, especially those that are poorer, tend to produce lower emissions. To achieve an accurate assessment, it is important to utilize a more equitable metric that accounts for the amount of emissions per million dollars of GDP.

When evaluated on this basis, the analysis unfolds a contrasting narrative (*Figure 12*). Now, all EaP countries emerge as leading emitters within the EU-27 framework. Ukraine, Belarus, and Azerbaijan occupy the top three positions, Georgia taking the fifth place, followed by Armenia and Moldova. For example, despite Lithuania

and Azerbaijan having economies of roughly equivalent size, Azerbaijan's emissions are more than threefold higher. Examination of GHG emissions from both perspective reveals that, despite lower total emission figures, when adjusted for economic output, EaP countries emerge as disproportionately high contributors to GHG emissions within the EU 27.

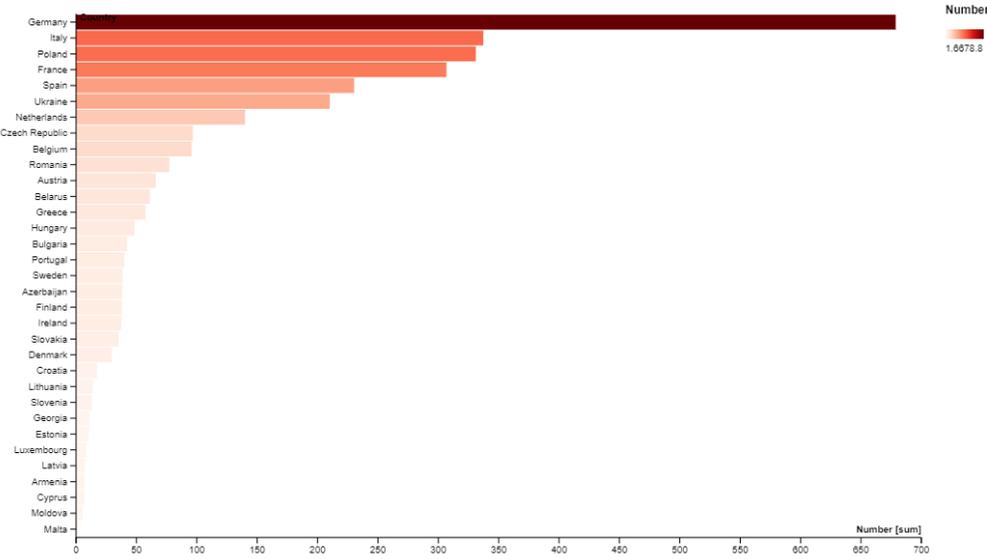


Figure 12: Total GHG emissions for EU-27 & EaP

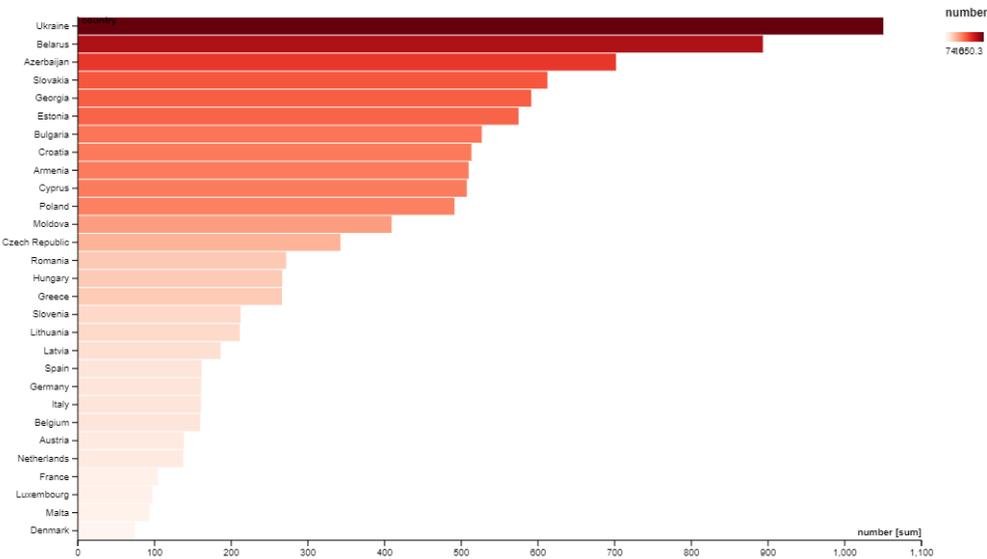


Figure 13: GHG emissions per million dollars of GDP for EU-27 & EaP

3.2.1 Current state and projections - temperature & precipitation, air, water, biodiversity, land use, waste

This section evaluates the environmental landscape of EaP countries. Aspects such as temperature and precipitation trends, climate change projections, the state of air, water, land use, agriculture, biodiversity, and waste are covered for each country. The assessment draws upon the most recent National Communications on Climate Change from each country, as well as national and sector-specific reports. Assessment reveals that the common environmental challenges for EaP countries, irrespective of geographical proximity, are water, waste and air contamination. Waste management still persists as an important challenge. Absence of recycling and proper disposals pose a risk to air contamination and human health by emitting harmful emissions. Water treatment infrastructure is largely absent in rural areas, while in urban areas, they are often outdated, leading to cross-contamination of drinking water supplies.

ARMENIA

The shift of Armenia towards a market economy has been accompanied by environmental issues. While some of these challenges existed before the collapse of the Soviet Union, many have emerged or intensified due to rapid economic transitions, widespread construction activities, the commercialization and privatization of land, and the expansion of mining operations (PFA, 2010). For a more detailed analysis of individual aspects, Armenia's 4th National Communication on Climate Change (NC4) was utilized (Ministry of Environment of the Republic of Armenia, 2020).

temperature and precipitation – Armenia is already experiencing the impacts of climate change, with an increase in annual mean temperature (rising by 1.23°C between 1929-2016) and a decrease in precipitation. These changes have intensified drought conditions and expanded drought-affected areas into mountain zones. The country has expressed vulnerability to climate change with land degradation, desertification due to the reduction in forested areas, and extreme weather events. The sectors most affected by these changes are agriculture, forestry, water resources, and energy. Moreover, projections through the Global Climate Model predict a further increase in the annual mean temperature by 1.6°C by 2040 and by 3.3°C by 2070.

Air – Air pollution is challenge in numerous cities of Armenia. Absence of proper waste management further challenges the air condition. In the capital, Yerevan, the primary landfills are generating open fire and smoke containing paints, heavy metals, and other toxins that are released into the atmosphere.

Water – Water quality and sanitation is at an acute state. Decaying infrastructure adds further problems to it, that cross-contaminates water between sewage and freshwater circulation. Most cities are missing the wastewater treatment systems, where partially treated water contaminates surroundings. Nowadays the service area of the wastewater serves only 70% of the population, while in rural areas wells and drills are the primary service systems. Despite some progress seen in implementing the

wastewater systems, it's still considered insufficient.

Land use, agriculture, biodiversity – Since the early 1990s, during the energy crisis and cold winters, deforestation issue has arisen in Armenia. This problem is particularly important for Armenia, where the forest covers 7% of the total national territory. Transition period left another ecological footprint on Armenian land use, where many of ecologically sensitive areas had been used for mining expansion. Nowadays more than 80% of Armenia is under the risk of different types of desertification due to natural threats such as increased temperature and droughts, as well as because of human activities.

Rising temperatures and drought patterns are placing the agricultural sector in an increased vulnerability. During the last years, Armenia experienced an annual agriculture damage of 15-30 billion AMD due to droughts, floods and other disasters. The high vulnerability trend is noticed especially in low lying and medium altitude zones of the country. Projections indicate the reduction in alpine zones by 22%, with a trend of habitat shrinkage. Climate change factors such as declining water levels, increasing droughts, and higher temperatures, coupled with human-induced impacts including developments in marginal areas and industrial activities lead to air and water pollution, and pose risks to Armenia's rich biodiversity (Biodiversity & Sustainable Forestry (BIOFOR), 2000).

Waste – Waste management problem has been rooted since the transition period, when a culture of non-payment for services became widespread. It was further intensified by insufficient government funding and poor maintenance quality. Although there have been improvements in recent years, waste management issues persist. Both urban and rural areas experience open fires and the emission of toxins, and the country lacks a systematic approach to the preliminary waste sorting.

AZERBAIJAN

Through the last three decades Azerbaijan experienced an oil boom, rapid economic shifts, mass construction of flagship projects, and widespread privatization. These developments, have brought forth a range of environmental challenges, that are further intensified by the climate change impacts. For an analysis of separate environmental aspects, the fifth National Report (Ministry of Ecology and Natural Resources (MENR), 2014), Azerbaijan's 3rd (Ministry of Ecology and Natural Resources, 2014), the 4th National Communication on Climate Change (Ministry of Ecology and Natural Resources, 2021), respectively from 2015 and 2020 years is utilized.

temperature and precipitation – Azerbaijan already experienced an average temperature increase of 1.3°C compared to the baseline period. It's experiencing more rapid warming than the global average increase. According to the high emission scenario, Azerbaijan will experience an increase of average temperature by 4.7°C by 2090 years. Based on this scenario, by the end of 2040, the its water resources will decrease by 5-10%, mainly due to increased temperature and reduced precipitation. Thus, Azer-

bajjan is among the most vulnerable countries in the South Caucasus to climate change, with particularly exposed sectors of agriculture, forestry, and water resources.

Air - After the Soviet collapse, followed by the closure of major industrial fields, air quality has been improved in Azerbaijan. However, industry, along with transport and power generation still remains as one of the major contributors to emission. Nowadays, increased motorization and energy industry (oil and gas) are the newly emerged challenges. According to the (WHO, 2023) Azerbaijan's air quality is considered as "moderately unsafe" with an annual mean concentration of PM_{2.5}, exceeding twice to the recommended maximum (10 µg/m³). While in the Capital, Baku the air quality level constantly remains under high risk.

Water - Water contamination is another challenge of Azerbaijan. Many settlements, except the major cities, are missing the water treatment systems. Untreated water is diverted to ravines, rivers, and lakes. Industrial production due to oil spills to the water, is another contributor to contamination.

Biodiversity - Azerbaijan has one of the richest biodiversity in the caucasus region, covering several bio-geographical zones. However, based on Fifth National Report (Ministry of Ecology and Natural Resources (MENR), 2014), there are several pressures that threaten its biodiversity. Land degradation is the prior challenge, caused both by natural phenomenon of soil erosion and manmade non-regulated construction activities. Forest harvesting and habitat fragmentation are other important pressures.

Waste - Similarly to other south caucasus countries, waste is a challenging aspect in Azerbaijan due to rapid population growth and industrialization. In urban areas, waste generation per capita is approaching 0.5 kg daily, and this figure is steadily rising. Although there have been some improvements in waste management and treatment, solid domestic waste continues to be a big source of GHG emissions.

BELARUS

Belarus experienced decreased emissions and improved air quality after gaining independence. This was mainly led due to closure of large scale industrial plants and increased attention to environmental concerns. Nowadays the main GHG contributors are the industry and agriculture, respectively accounting 62% and 24%. However, some challenges still persist in waste management that has side effects on water and air quality. Climate change is another pressing factor that puts different sectors under a high vulnerability (EU4Environment, 2021).

temperature and precipitation - Belarus experienced 1.3°C annual mean temperature increase compared to the baseline scenario. The difference is most noticeable in the winter season, with a higher increase of 2.1-2.3°C. Dry periods are also increased, especially in summer and autumn periods. Human's health is the most vulnerable against increased temperature patterns, especially in developing countries, like Belarus. Droughts endanger the forest area and its ecosystems and further amplify forest fires.

Air - There had been a 50% decrease in air pollutants since the 1990s, mainly as a result of closure of large scale industrial entities. The shift to natural gas in energy sectors and increased attention to environmental policies for air pollution control (fees, permits) played an important role as well (OECD, n.d.). However, air quality still remains low in the major cities, where the main pollutants are vehicles, increased motorization, lower quality gasoline and industries.

Water - Despite limited financial resources, Belarus paid attention to water management. Water supply and wastewater coverage had been increased, along with more than 45 renovated points. These improvements eventually resulted in increased water quality in most of the areas. However, water quality issues still persist at a local level, mainly caused by industrial wastewater, which is joined to the municipal wastewater and lacks the proper pre-treatment procedures to eliminate toxic pollutants. Cross-contamination particularly threatens shallow wells in rural parts, where the pollutants are spreading through drinking water supply.

land use, agriculture, biodiversity - More than 40% of the national territory is covered by forest area (United Nations, 2016), which had been expanded from the period 2006-2015 by 2.87%. Despite giving attention to biodiversity and natural reserves, some issues in land use and biodiversity persists. Due to agriculture and excessive use of water, wetlands are experiencing draining, affecting connected water sources and local biodiversity. Moreover, climate change is another pressing factor on biodiversity. Decrease of some local species and appearance of non-typical species, is already observed in the east and north parts of Belarus.

Waste - Belarus has a relatively high municipal waste accounting for 0.4kg per capita (2019) (Institute for Waste Management and Circular Economy of the Technische Universität Dresden, 2021). Almost all solid municipal waste is redistributed and disposed of to 202 landfills, out of which only 4% is recycled. One of the biggest contributors to solid waste is the industrial sector. The share of industrial waste increased by 51% from 2005-2014, while the processing chain is missing due to lack of investments and technologies. Despite some investment and initiatives in waste processing, the country is still missing significant improvements.

GEORGIA

Transition towards a market economy brought severe environmental challenges to Georgia. Most of them were due to accelerated economic shifts and consecutive processes of mass construction, privatization and urban sprawl. The situation has been further complicated by new challenges resulting from climate change, adding to the already existing environmental issues. For an analysis of separate aspects Georgia's 4th National Communication on Climate Change (NC4) (The Ministry of Environmental Protection and Agriculture of Georgia, 2021) will be used.

temperature and precipitation - Georgia is experiencing the impacts of climate change, evidenced by an increase in the annual mean temperature and changes in precipi-

tation patterns. Although these trends vary across the different climatic zones, the average mean temperature has risen by 0.47°C from the baseline period to 2015. The Regional Climate Model for the 30-year period from 2041-2070, estimates an increase in the annual average temperature by 1.6-3.0°C. For the period leading up to 2100, the increase is predicted to reach up to 3.70°C.

Air - In early 90's, an abolishment of sustainable tram trolley's was followed by an increased rate of motorization and car ownership. This trend mirrored that of the Balkan states, where most imported vehicles were second-hand, chosen for their affordability. An increased motorization rate, along with a low quality of fuel, became the major sources of air contamination and health problems. According to the (Nozaki, 2023), Tbilisi as one of the most contaminated cities in Georgia, its poor air quality is exceeding the norm of international standards.

Water - The transition period left a negative impact on water conditions that big cities are still experiencing. Informal settlements and constructions, mainly in the capital, have a poor utility provision and contaminate rivers. The centralized sewage system is represented only in 45 towns and most of them are outdated, mainly built in the soviet era (30-45 years old). While only 80% of the country is connected to the centralized wastewater system. Most of the water treatment systems don't function properly, lack the maintenance and further contaminate the environment.

land use, agriculture, biodiversity - The land use distribution shows the 70.6% land occupation by forest, followed by croplands and agriculture. Agriculture, occupying 13.6% of the land, had been an important part of the national economy. However, climate change poses a significant threat to livestock and its productivity that is an important component of food security in Georgia. Moreover, biodiversity is also experiencing a loss due to uncontrolled activities of land expansion, industry, and climate change, especially in alpine zones, forest and wetlands. In the forests the biggest threats are accelerated forest fires, erosion and soil wash.

Waste - Waste management remains a challenge for Georgia, albeit to a lower level compared to Armenia. Although there have been some improvements since the 90s, it is still an important contributor to the country's GHG emissions. Out of 57 official landfills, only two of them manage the methane emission, which spreads over the major cities. Household waste is fully managed in major cities and urban areas, while in rural areas it still persists as a problem. Many inhabitants dump their waste into ravens and rivers that are producing unmanaged natural landfills. The primary reason for the unresolved issue is insufficient funds on regional and national levels.

MOLOVA

Moldova, along with soviet legacy, faces negative consequences of climate change. The projection of more severe and frequent natural hazards, increases the country's vulnerabilities, including land degradation, increased water levels, and air pollution in major urban areas. The most vulnerable sectors against climate challenge are

agriculture, forestry, water resources and human health.

temperature and precipitation - Moldova has a high vulnerability to climate change due to its socio-economic condition. According to (EU4Climate, 2023), costs of climate change are mainly associated with floods, droughts and late spring frosts. Extreme weather patterns have already resulted in loss of lives and incomes. According to the Fifth National Communication of the Republic of Moldova (Republic of Moldova, 2023), the country had become warmer by 1.2°C compared to baseline scenarios. Future projections in annual and seasonal temperatures indicate an increase of annual mean temperature by 1.7°C by the end of 2039.

Air - Despite the partial coverage by air monitoring systems, according to (UNDP, 2021), air pollution in Moldova is low, within the limits set by WHO. The main pollutants are vehicles, energy sector and industries. Contamination level is increased near the large-scale power plants and in urban areas of the Capital, Chisinau.

Water - Water state and its contamination is an acute issue in Moldova, particularly in rural areas, where only 17% of the population are accessed by centralized water supplies and most of them are dependent on groundwater sources. The lack of investments in waste management and wastewater treatment are amplifying the problem. According to the 3rd Environmental Performance Review of the Republic of Moldova (Republic of Moldova, 2014), only 72% of centralized water sources are meeting the sanitary standards, while this number is higher in non-centralized sources.

Land use, agriculture and biodiversity - During the privatization process land became fragmented and made complicated to maintain. Climate change, accompanied by lower precipitation and frost, is the other pressure that amplifies land degradation and poses the risk of desertification. Biodiversity also faces challenges, primarily due to the limited forested area (covering only 12% of the national territory). This amount has been gradually reduced due to illegal logging and has given birth to issues like flooding and erosion.

Waste - Moldova has a progressively increasing rate of the solid waste. In 2018 an average amount per capita reached 0.33 kg, which is almost 70% increase compared to 2001 levels (Seremet, 2020). Along with the growing number of waste, only 10% of the landfills are officially authorized. Most of them are reaching their capacity and aren't meeting the international sanitary standards (World Bank, Environment and Natural Resources Practice, 2016). The management still relies on outdated disposal methods, and according to the statistics of the National Waste Management Strategy (Ministry of Environment of the Republic of Moldova, 2023), only 60-90% of the urban population is covered by the waste collection. In rural areas the waste collection is non-existent, They are dumped in non-authorized places or in nature, which spreads diseases and threatens the environment.

UKRAINE

This section overviews the pre and the post-conflict challenges in Ukraine. The

analysis focuses on temperature, precipitation change, water and air, and the subsequent section addresses the impacts of the war.

temperature and precipitation - Temperature shifts and increased precipitation patterns are predicted in Ukraine. Projections for the 202-2040 year period are showing an increase of 0.5-1.5°C compared to the baseline scenario. The warming will be particularly visible in the northern regions and during the winter season (ClimateChange-Post, 2024). Increased temperature patterns are imposing risks of droughts, forest fires, heat waves. The heavy precipitation, accompanied by rainstorms, will result in urban flooding and mudflows - and ultimately will affect residential areas and agricultural productivity. The data is delineating the increasing occurrence of floods and droughts, which already brought severe economic losses and fatalities in Ukraine.

Air - According to the report of Health Impacts and Social Costs Associated With Air Pollution in Larger Urban Areas of Ukraine (UNDP, 2022), Ukraine is one of the most affected countries in the EU; for a comparison, air quality in 2017 reached 20.3 µg/m³, which exceeds four times to the threshold set by WHO (5 µg/m³). Mortality due to air quality, especially the premature one, is also one of the highest and corresponds to 10% of all fatalities. The war further deteriorated the air quality; Flumes and smoke had a high impact on air condition, especially in urban areas.

Water - The war has a long-term consequences to the water quality. Biodiversity and water are the most vulnerable aspects during the wartime and Ukraine was no exception to it. (Neumann, 2023) already reported that operations are held on/into the regions with strategic water infrastructure and industrialized water sector (such as power plants). High environmental damage is already done due to mass flooding after dam explosions and release of untreated wastewater. Attacks on hydropower plants and floodings could have long-term and irreversible environmental impacts. Meanwhile millions of people are already facing the scarcity of drinking water supply - which is gradually decreasing and contaminating due to their dependency on power plants and damage to core infrastructure.

land use, agriculture and biodiversity - Agriculture is the major source of export economy of Ukraine. Its territory is one of the most extensively farmed lands in Europe, with 70% dedicated to agricultural fields (Saiko, 1995). Another important land cover is the forests, occupying 16% of the national territory. However, explosions negatively impacted forests, with an estimated 20,000 ha burnt forest area in Luhansk region.

Moreover, as one of the largest European countries, Ukraine is hosting 35% of the European biodiversity. However, after one year of armed conflict, negative effects on biodiversity are already registered. According to the Ministry of Environmental Protection and Natural Resources of Ukraine, 20% of natural protected areas have been already affected by war (Ifaw, 2023).

Waste - According to the recent data regarding the absolute waste volume, Ukraine is positioned as one of the top places, with an annual articulated waste of 474.1 million

tons, of which 448 mln tons are categorized as hazardous (Kovalenko, 2022). Big scale resource use, energy, and raw material extraction are the primary reasons for waste articulation, while the outdated sorting technologies and uncontrolled landfills further amplify this problem. Waste Fields are one of the major environmental pollutants, as they emit harmful gasses and contaminate groundwater with hazardous chemicals.

3.2.2 Environmental impacts of the Ukraine's War and post-war reconstruction possibilities

This chapter doesn't analyze political roots of the conflict, rather it focuses on environmental consequences arising from the war and its estimated impacts on green transition. As has been stated above, Ukraine is already yielding the impacts of climate change and by the end of the century, projections are predicting an increase of annual mean temperature by 2.5-3°C. In a context where other countries are putting efforts to mitigate and adapt to climate change, Ukraine has found itself in a situation, where the war is gradually devastating existing natural reserves and hinders their ability to improve the initial environmental condition.

The war, although not resolved yet, has direct and indirect effects on its environment. Direct impacts are immediately visible, such as damaged habitats and species, destroyed forest cover, and flooded territories due to attacks on hydropower stations; however, indirect ones can't be evaluated immediately and are going to have a long-term impact on the future. Most typical indirect impacts, such as air pollution, multi level water contamination and deployed resources, are transboundary. Meaning that damages, both existing and potential, will spill over the European neighbors. Thus, the war and its consequences are hazardous beyond the Ukrainian border and impacts the broader regional context.

Although the damage is evident, it's still challenging to determine a specific extent primarily due to the ongoing nature of the war, unreported military activities, and absence of monitoring systems. Early assessments are highlighting the hazards and scales of air pollution, as it's going to have long-term and harmful effects on Ukraine and neighbors (EU4Climate, 2023). The pollution is primarily steaming from military sites and coal mines in the war zone with explosions, demolitions and open fires.

Conflict also resulted in an increased war waste which is extremelly harmful for the population's health. Abandoned equipment, vehicles, infrastructure debris and medical waste was thrown uncontrollably, some of them were taken by water bodies and spread into nature. A big portion of waste is toxic with a need for special disposal and further contaminates air and water. Additionally, most operations are held nearby strategic water infrastructure and industrial zones (power plants, hydroelectric stations). Tremendous environmental damage is already done due to mass flooding after dam explosions and release of untreated wastewater. Attacks on hydropower plants and floodings could have long-term and irreversible environmental impacts. While, millions of people are already facing the scarcity and pollu-

tion of drinking water supply due to damage of core water infrastructure.

Ecosystem services and nature are also affected by the war. According to the (WWF, 2023), 900 protected areas have already been damaged by the war, accounting for 30% of the total natural and protected areas. Several hectares of the forests were destroyed due to open fires and military operations. Destruction of forest and green areas, in terms of environmental consequences, are one of the critical aspects, as a source of carbon sinks and sequestration. Their destruction will impact the future and present possibilities to offset emissions and further increase adaptation possibilities.

GHG emissions are one of the critical aspects while analyzing the impacts of the war and future possibilities for a green transition. Damage to green services and ecosystems will decrease the carbon absorption capacities, and the consequences of conflict (explosions, demolition, transportation) will contribute to the increase of GHG emissions. According to official sources, estimation by the Ministry of Environment already recorded 33 mln tons of CO₂ during the initial period (10 months) of the war (EU4Climate, 2023). Besides, it's important to account for post-war reconstruction-related emissions, consisting of infrastructure rebuilding, transportation, resource extraction - which is estimated to be 48.7 mln tons in total.

The Ukrainian government already assigned the National council for a post-war recovery. The structure is in charge of developing a Post-war Recovery and Development Plan (OECD, 2022) for the country, which is aligned with low-emission and green economy principles. The plan encompasses five priority areas of

“*climate mitigation and adaptation policy; environmental safety and effective waste management; sustainable use of natural resources; and conservation of natural ecosystems, preservation of biological diversity and restoration and development of protected areas. Plan*” (OECD, 2022).

However, implementation processes don't come without challenges. It's estimated that Ukraine may encounter difficulties in funding for green measures, while transparency and effectiveness for allocating them is also questioned. Despite the negative impacts of the war, allocated extra emissions and challenges in green reconstruction, positive aspects persist. Most of the housing stock was built during the soviet era, without insufficient energy efficiency rates; rebuilding or reconstruction with circular economy principles can mitigate their impact by using building materials with higher efficiency and applying new standards on them. Thus, in the long term, challenges can be overcome by the “*building back better*” principle.

3.2.3 Common environmental challenges: EaP & EU

After analyzing the environmental profile of EaP countries, some common challenges between EaP and the EU have been delineated. In the EU context, effects of climate change are already manifesting in the form of extreme weather conditions and climate-related hazards, including heatwaves, floods, droughts, and forest fires, which are projected to increase in frequency and intensity in most regions of the continent. High temperatures, along with higher precipitation and longer dry periods, are expected to provoke heatwaves and droughts. Both in combination will fuel larger scale forest fires,

damage agricultural sectors with lower crop yields and livestock productivity. Those hazards will put down vulnerable people with health problems and economic issues.

Meanwhile, EaP countries are experiencing increased temperature patterns, with climate change projections predicting an increased range of 1-3C in all countries. In caucasus countries, decreased precipitation numbers have intensified droughts and expanded drought areas to mountain zones. Land degradation and desertification patterns are also visible in Armenia, Azerbaijan, and Moldova. The most exposed aspects towards climate change are agriculture and forestry. In East European countries, similarly to the Caucasus, longer dry periods are noticed with more extreme weather occurrences. Increased temperature and droughts in all EaP countries are the prerequisite of forest area and biodiversity loss.

The comparative analysis indicates a rising temperature trend both in the EU region and its neighboring countries. Occurrence of more extreme weather events, with longer drier periods is observed. Drought is another common challenge, with increased temperature and lower precipitation patterns. This combination fuels forest fires and poses a threat to agricultural productivity.

Regarding the GHG emission trends, the recent data from the (EEA, 2023) reveals that the three largest contributors in EU are the energy supply, domestic transport, and industry, with respective shares of 26%, 22%, and 22%. These sectors are followed by agriculture, accounting for 12%, and the residential and commercial sectors at 13%. In contrast, within EaP, the energy sector is the highest emitter, with its contribution ranging from a minimum of 51.5% in Moldova to a maximum of 85% in Azerbaijan. In these countries, agriculture ranks as the second largest source of emissions, except in Moldova. Another sources of emissions include the industry and transport sectors. Within the EaP, agriculture is identified as the second largest contributor to emissions, whereas in the EU, it is ranked fourth.

When addressing shared environmental challenges, it is important to highlight the impacts of the war in Ukraine. The EU will inevitably bear part of the conflict's legacy, facing issues like air pollution, water contamination, and deployed resources, all of which have transboundary effects. Although the full extent of the damages has yet to be assessed, they are expected to have spillover effects on the EU neighboring regions. Therefore, the war and its repercussions present risks that extend beyond Ukraine's borders and affects the broader regional context. Besides environmental consequences, conflict will increase the total GHG emissions for the EU. The damage to green services and ecosystems will decrease the carbon absorption capacities, along with explosions, demolitions, and transportation emissions that will increase in the total emissions.

Green Transition in EaP

SECTION 3.3

3.3.1 Progress in adopting & implementing green policies and practices

Country-specific progress in adoption and implementation of green policies has been observed in six EaP countries. While acknowledging individual efforts, this section aims to shift the focus to a collaborative partnership level. Thus, It will discuss the progress on a broader scale.

In 2017, during the EaP summit, agenda ‘20 Deliverables for 2020’ was launched. It has been a core instrument to address common environmental and sectoral challenges between the EU and the EaP. The agenda outlined 20 key objectives distributed across four main areas: economic development, governance enhancement, improved connectivity, and societal resilience (European Commission, 2020), particular focus was set on climate change. The stronger connectivity pillar was tailored to address environmental and energy related topics, such as increasing energy security and renewable’s share, reducing GHG emissions and adapting to climate change.

Following the successful implementation and positive outcomes observed through the reports on the ‘20 Deliverables for 2020,’ a forward-looking initiative, “*A new agenda beyond 2020,*” was launched in 2019. It outlined ways of how to achieve progress upon common challenges in the partnerships and with the EU itself. Agenda delineated five objectives for upcoming years, which generally aimed to

“*strengthen resilience, foster sustainable development and deliver tangible results for society (European Commission, 2020)*“

Among several focal points, the agenda highlights the critical theme of environment and climate resilience. Furthermore, top ten priorities have been defined for upcoming 2025. As part of the environmental pillar, following actions are envisaged: reducing energy consumption and investment in sustainable energy, gaining access to water services, monitoring and improving the air quality in certain cities, and building priority roads and railways.

Specific initiatives are also tailored under the broad concepts and pillars; As water quality, waste management, sanitation and green areas have been the major problems in all EaP countries, the initiatives are centered around enhancing provision of water supply, urban mobility and waste management. Attention is given to ener-

gy security, efficiency and renewables with modernizing energy legislation, implementing regulatory frameworks for energy efficiency and investment mobilization. reduction of coal use is planned in order to curb GHG and mitigate the pollution. recycling and circular economy principles are also emphasized with an ultimate goal to reduce the waste. Furthermore, recycling and circular economy principles are underscored for waste reduction. Complementary initiatives are also centered around environmental governance and capacity building to fortify environmentally sound policies and legislation.

In terms of progress for adopting green practices, the “European Union for Environment” (EU4Environment) should be highlighted. The programme was initiated in 2019, after successful implementation of “20 deliverables for 2020” and as a momentum for the 10th year anniversary for EaP establishment (European Union for Environment, 2019). It’s mainly working on a regional and national level for six partner countries with a specific objective centered around preserving natural capital and enhancing environment quality. Under the program five pillars are defined, referring to circular economy, greener decision making, environment, ecosystem services and knowledge sharing among the partners and the EU. under the five core topics, the regional and the country-specific actions are gathered. Ultimately, the programme assists the partners to greener legislative and policy shifts, adoption of greener business models and technologies that would create more jobs and will help partners for a green transition. It also sets particular focus on environmental aspects such as protection of forests, management of protected areas and environmental risks.

The ‘EU4Climate’ is another EU funded initiative, which has been helping the partner countries in formulation and implementation of climate policies (European Union, 2018). Its main objective is to foster the low-emission and climate-resilient future for the partnership and align their commitments to the 2015 Paris Agreement on Climate Change. The most important goals that the initiative strives to achieve is closely linked to the Green Agenda’s objectives. Under the ‘EU4Climate, partner countries are expected to develop the mid-century low-emission development strategies (LEDS), which differ from country to country. Also align themselves to EU environmental acquis and other bilateral cooperations. Under the initiative, countries are also asked to introduce the emissions monitoring, reporting and verification (MRV) frameworks, which would help them to detect carbon intensive sectors and areas and further implement adaptation strategies accordingly.

Last but not least, some past corporations should be highlighted as well. More specifically, in 2013 the *Greening Economies in the Eastern Neighbourhood (EaP GREEN)* was launched which aimed at greening the economies of six partner countries with improved environmental policies and management approaches (Reka MAZUR, 2013). The ultimate goal was to establish themselves in global markets, better manage the natural capital and improve the environment quality by more resilient ecosystems.

Forest Law Enforcement and Governance (FLEG) helped authorities to gather the data

regarding the forest, which would help them for upcoming institutional reform processes. It also enabled participation at different levels, starting from the local municipalities of six EaP countries to international level with the EU and the World Bank (FLEG , 2017).

Lastly, the EaP countries were reunited across the *Emerald Network*, which helped them to safeguard and preserve the natural habitats. The partner countries set their commitments to expand the share of protected areas and ensure survival of various habitats.

3.3.2 Alignment with EGD - Policy agreements & incentives

Different EU funded initiatives are aligning with the Green Agenda by sharing common goals of achieving lower emissions. An example of this alignment is the ‘EU4Climate’ initiative, which guides EaP partners to improve their contributions to the 2015 Paris Agreement. Concurrently, the EGD also focuses on commitments outlined in the same agreement. Similar to ‘EU4Climate’, another EU-funded program, ‘EU4Environment’, builds upon the EGD. The program anticipates partner countries to progress towards a circular economy, greener decision-making, and sustainable growth.

While the previous initiatives are linked with the EU Agenda by the sharing mutual commitments, the EaP policy beyond 2020, directly supports its delivery. It is anticipated that the economic modernization and shifts in trade patterns between the EU and the EaP countries, as promised by the beyond 2020 policy, will lead to increased carbon emissions. In this context, mutual commitment to carbon footprint balance and transition towards low emission practices, becomes even more crucial. Recognizing this rivalry, the partner countries have already expressed their interest and support in delivering the EGD. Therefore, the policy beyond 2020 works towards modernization of EaP with a long-term objective referring to transition towards environmental and climate resilience. Specific initiatives such as managing the air pollution, improving waste management, implementing sustainable urban mobility and energy efficiency practices, and coal reduction - are acting together with a common objective to reduce the GHG emissions and align with the EU’s zero pollution plan.

Referring to the implementation of EGD itself, there are certain mechanisms on a partnership level, which is mainly based on a series of permanent meetings such as:

- Summits of the Heads of State of the EaP and the EU
- Meetings of high and middle level officials
- EaP Civil Society Forum
- Panel on Environment and Climate Change
- Working Group “Energy, Transport, Environment and Climate Change” of the EaP Civil Society Forum

In terms of normative regulation, according to the (Tsebenko, 2023), the cooperation across the EGD is mainly facilitated by the Joint working documents (EU commission and EU High Representative on Foreign Affairs and Security Policy “Eastern Partnership”), declaration regarding the climate change in EaP, and the work program of platform 3 (“Interconnections, Energy Efficiency, Environment and Climate Change”).

However, there’s an unambiguous level of implementation and motivation among the EaP countries, mainly due to their different aspirations and political trajectory. The split is obvious among Georgia, Moldova and Ukraine - who already have signed the Association Agreement (AA) and Armenia and Belarus - who signed the Eurasian Economic Union (led by Russia). While Azerbaijan positions itself closer to the latter one and Belarus has a suspended participation in EaP.

Georgia, Moldova, and Ukraine have signed the AA, which is also linked to the fulfillment of EGD commitments. Among three countries, Moldova already updated its environmental policy direction by aligning it with the EGD. More specifically the country adopted a new economic model and the roadmap designed for sustainable development (Moldpres, 2023). Its environmental policy is considering EGD’s pillars of clean water and air, sustainable mobility, circular economy, biodiversity and the food chain. Numerous initiatives are tailored on the national level to support the Green Deal by achieving carbon neutrality by 2050.

Similarly to Moldova, Ukraine also expressed its interest to aligning its policies with the Green Agenda. Changes are observed in the policy field, with a focus on the thematic pillars of the EGD, including environmental policy, waste management, and industrial pollution, being brought to the forefront. Furthermore, monitoring systems have been implemented for identification and reduction of environmental impacts in critical areas. In the energy sector, the adoption of the Energy Strategy 2035 and the National Plan for 2030 aims to increase the number of net-zero buildings. Meanwhile, in the transportation sector, Ukraine committed to greening its mobility system by approving the Transport Strategy for 2030 (Deputy Prime Minister’s office for European and Euro-Atlantic integration of Ukraine , 2023).

Moreover, Georgia has been a stable energy partner for Ukraine, as the oil corridor from the Caspian sea to Europe is crossing over Georgia. In addition to this partnership, Georgia, along with Moldova and Ukraine, has committed to implementing the Green Agenda. As part of it, the Green Agenda project was initiated in 2023, spanning over a three year period (CENN, 2023). This project, as the most important initiative for EGD, will be in charge of developing the climate-neutrality roadmap for 2050. It will address the EGD thematic areas of smart mobility, circular economy, food chains, biodiversity conservation, and energy efficiency.

In the case of Azerbaijan, Armenia and Belarus, an unstable trend is noticed in aligning with EGD. The trend is especially challenging in the energy sector, as the supply is mainly controlled by the Russian agencies. Hence, the efforts to modernize or

diversify the energy sector could not find a successful implementation.

Armenia has some progress in aligning with the EGD. In 2023, along with Georgia, it initiated the Green Agenda project, with an aim to harmonize its environmental policies with the EU's one and put a sustainable path towards addressing the national challenges of air pollution, deforestation and the waste management (SEI, 2023).

The situation is particularly complex in Belarus. The unstable relationship with the EU has resulted in Belarus showing less interest in aligning its policies with the Union's. This tension eventually culminated in 2021 when Belarus announced its decision to suspend the participation in the EaP. According to scholars (Tsebenko, 2023), the primary concerns in Belarus regarding the EGD revolve around fears that the carbon tax might make Belarusian products less competitive. There is also an apprehension of reduced demand for Belarusian petroleum products, which constitute a key export to the EU.

Despite the split, some progress is observed on both sides. Initiatives are mainly initiated on the national level and a strong regional cooperation for implementing the EGD measures is missing. Georgia, Moldova, and Ukraine, due to their aspirations to join the EU, have achieved progress in incorporating EGD standards into their national policies, with a particular emphasis on green economy and renewable energy. Armenia, Azerbaijan, and Belarus are obstructing the implementation of the EGD, primarily due to chosen political path and external factors. The lack of progress is influenced by factors such as the impact of Russia on the energy sector, the authoritarian governance, and the presence of corruption (Tsebenko, 2023).

3.3.3 Financing and support mechanisms

Aligning with EGD measures comes with finances. They have to be mobilized not only at the national level but also at the regional and international levels. Unlike the WB countries, which have established the GAWB, a similar tailored approach has not yet been adopted for the EaP countries. Currently, the main mechanism for implementing the EGD in EaP involves permanent meetings, and in some countries, commitments made through Association Agreement. Due to the absence of a specific agenda for the EaP, there are no dedicated funds specifically tied to it.

Upon examination of financial instruments (*Figure 13*), they can be systematically classified into three tiers: *international, regional and national levels*. At the international level, funding is provided from 3 major sources of EU member states and Commission, beneficiary parties, and the Multiannual Financial Framework (MFF). EU member states and the Commission are allocating funds by means of Organisation for Economic Co-operation and Development (OECD), Innov Financial Instruments, and the Neighborhood Development and Interna-

tional Cooperation Instrument (NDICI). The NDICI incorporates a consolidated External Action Guarantee (EAG) and introduces the new European Fund for Sustainable Investments Plus (EFSD+) (European Commission, 2022). These components work in tandem to leverage private sector resources for EU external action by providing guarantees, grants through ‘blending’ mode. Those three funding sources are mainly focusing on identifying opportunities and barriers for green finance, enhancing quality of projects and easing their implementation and providing research and innovation.

From the beneficiary parties, two major players of International financial Institutions (IFIS) and the Public Private Partnership of Green for Growth Fund (GGF) are provided. Relevant investment opportunities are available from the IFIS, such as the European Bank for Reconstruction and Development (EBRD), World Bank, Green Climate Fund (GCF), European Investment Bank (EIB), Global Environment Facility (GEF), European Development Finance Institutions (DFIS). They work on both levels of transnational and national (Commission for Citizenship, Governance, Institutional and External Affairs, 2022). The EaP benefits from their financial aid to get technical assistance for large scale projects, improve waste management, air and water quality, mobility, energy profiles, and to connect to the global exchange of practices.

From the Multiannual Financial Framework (MFF), three major investment providers are steaming: External investment Fund, IPA, and the European Neighborhood Instrument (ENI). IPA mainly focus on energy efficiency, renewables. while the ENI supports projects related to environmental protection, sustainable development, and climate change adaptation.

Transitioning to the regional level, four principal financial instruments emerge, including the new agenda beyond 2020, EU4Environment, EU4Climate, and EU4Energy. A new agenda beyond 2020 is structured around two pillars of the Economic and Investment plan and the private investments, both allocating a total of 19.3€ billion. Agenda’s investment plan features a series of flagship initiatives tailored for each partner country and aims to build resilient and equitable societies.

EU4Environment assists EaP to identify green investment opportunities and sources of public and private funding. Under the programme, three financial tools of green bonds, EaP GREEN, and the National Medium-Term Expenditure Frameworks (MTEFs) are reunited. Green bonds allocate resources for the low-carbon transition, including renewable energy sources, energy efficiency, reduction in air, water, soil pollution, recycling and waste management. EaP GREEN supports the energy subsidy reform, while the MTEFs assists in improving public resource utilization for reaching national climate-related objectives. The remaining initiatives, EU4Climate supports EaP countries in improving

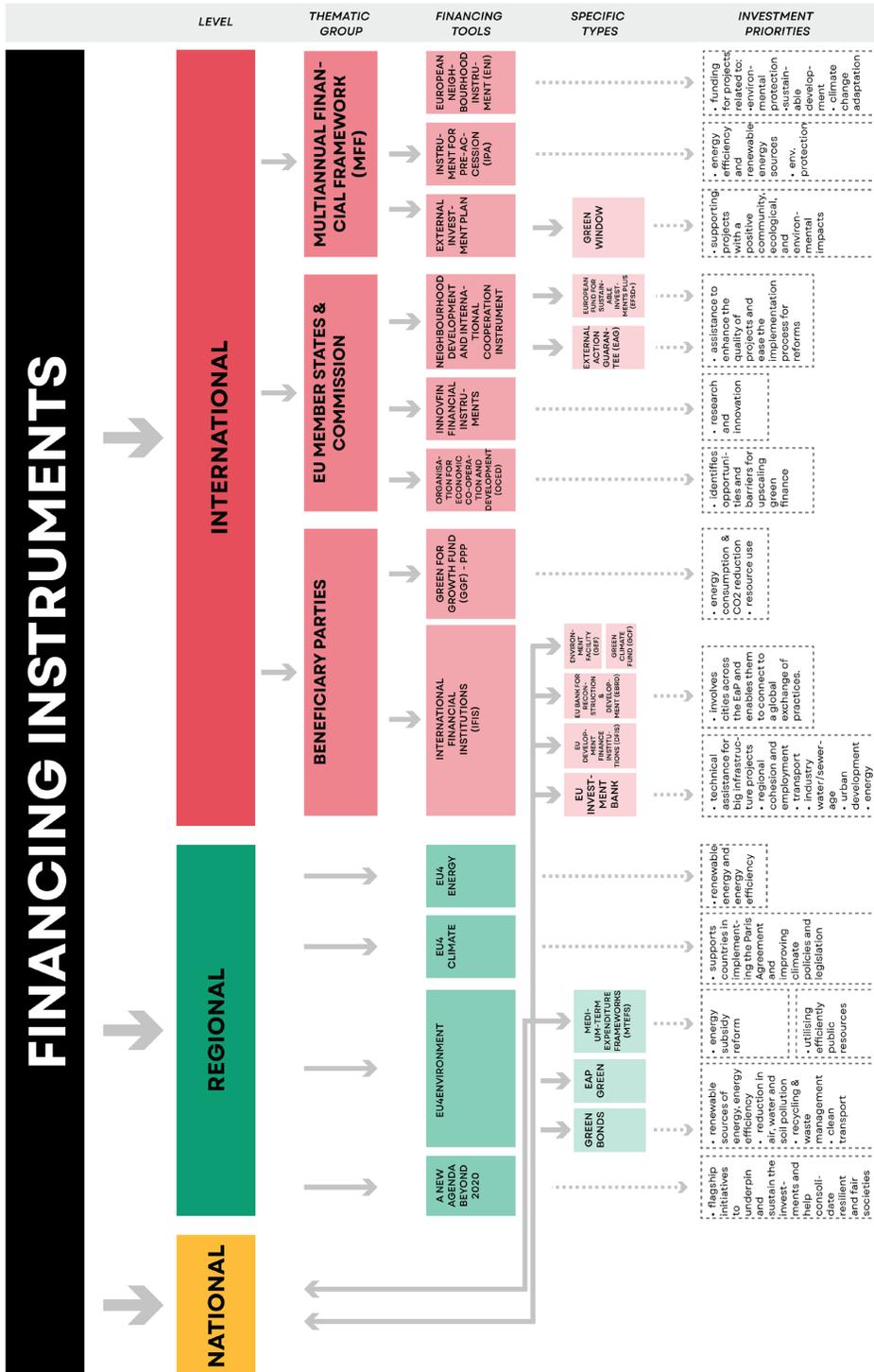


Figure 14: Available Financing tools for EaP Green Transition

climate policies and legislation, while the EU4Energy focuses on sustainable energy policies at the regional level.

3.3.4 Environmental, administrative, technological & capacity constraints for GT

To assess the challenges and capacities for the GT of the EaP countries, recent National Communications were analyzed. These challenges were categorized into four thematic blocks: environment, governance and administrative capacities, technological capabilities, and political instability.

Focusing on *environmental challenges*, the EaP countries face issues primarily due to global climate change. The EU4Climate analysis reveals an increased vulnerability of these countries, with agriculture, water, and forestry being the most affected sectors. The major challenge in reducing CO₂ emissions is the outdated waste management practices prevalent across all EaP countries, that leads to increased solid waste generation. Issues such as improper waste management, lack of recycling, and unregulated dumpsites contribute to air, soil and water contamination. Another concern is the decrease in forest cover, crucial for reducing CO₂ emissions. Illegal logging, along with climate change, is the primary cause of this reduction in forest area. Thus, the need for strengthened public control and increased awareness in forest management and monitoring should be taken into consideration.

Moving to the *governmental and administrative* theme, several challenges have been identified: internal inter-partnership divisions, low level of development in EaP countries, corruption, lack of investments and awareness, and institutional and administrative constraints.

The biggest threat to implementing the EGD in EaP is the inter-partnership split in terms of political orientation and EU integration. It is expected that the trio of Georgia, Moldova, and Ukraine will commit more to the Agenda's implementation due to the Association Agreement (AA). Meanwhile, the remaining countries are likely to show lower levels of implementation and motivation.

The low level of economic development of the EaP countries³ should be taken into consideration. Immediate economic challenges like poverty, unemployment, and access to basic services often overshadow long-term environmental goals due to the direct link between economic development and financial resources. Moreover,

³ GDP Per Capita ranking of EaP countries. Data source: *World Bank* / Year: 2022.
Ukraine 60 - GDP at about 4,224 USD per capita
Azerbaijan 74 - GDP at about 7,762 USD per capita
Belarus 79 - GDP at about USD 7,888 per capita
Georgia 112 - GDP at about 6,675 USD per capita
Armenia 121 - GDP at about 7,018 USD per capita
Moldova 138 - GDP at about 5,714 USD per capita

while referring to financial constraints, the lack of investments should be highlighted. In most EaP countries, limited funds are the main reasons for improper waste management, water treatment and consecutive cross-contamination.

Social awareness, including the low level of ecological culture in the EaP countries, is another barrier to the green transition path. For instance, Armenia's Fourth National Communication links this to the partial incorporation of climate change topics into mandatory school subjects. Meanwhile, in Azerbaijan, the major barriers to implementing Climate Smart Agriculture and curbing CO₂ emissions are associated with social barriers and a lack of knowledge about new technology (Ministry of Ecology and Natural Resources Republic of Azerbaijan, 2021).

Corruption level in most EaP countries presents another challenge to implementing EGD measures. Challenges also arise in institutional arrangements, where state institutions specifically designated for climate change are missing. For instance, in Georgia and Azerbaijan, there's an absence of a structural unit (or working group) that solely focuses on climate change. The responsibility for related topics is assigned to a single member, who also shares responsibilities for other duties. This weak institutional arrangement leads to another challenge associated with a lack of specialized structure, and therefore, training specialists on climate change. This issue is particularly problematic in Belarus and Moldova, where an inadequate number of staff members lack the required training and skills to tackle the green challenges (Anna Maria Augustyn, 2022). For instance, Moldova's national report outlined capacity building needs for climate change as one of the critical needs.

Moreover, an important challenge arises for a gap between the climate change issues and their inclusion in the regulatory documents and sectoral programs. There's an absence of a single common regulatory framework that covers sectoral activities. Low-carbon measures exist sectorally (air, energy, water waste), although coordination among sectoral public agencies is weak. Therefore, the single legal framework that unites activities on a national or transnational (Partnership) level and allows them to monitor them, is missing. For instance, in Armenia, the lack of a cohesive strategic planning framework of climate change and green transition, hinders a full understanding and evaluation of national efforts of climate-related policies that have been put into place (Ministry of Environment of the Republic of Armenia, 2020).

The non-coherence of the climate change framework and poor coordination among public agencies at the national level spreads over the region. The confusion of separate countries leads to the lack of a common vision in the partnership regarding the implementation of EGD measures - and therefore the insufficient regional cooperation.

Another important challenge that comes with weak coordination are issues in identification of financial needs. Due to absence of measures at national and regional level, authorities are facing problems with exploration of financial instruments and sources designated for solving climate actions.

While exploring the technological constraints, several challenges appeared, mainly related to the Soviet legacy of carbon-intensive industries, unskilled workers, energy dependency, and insufficient monitoring systems. Most of them stem from the carbon-intensive industries and dependency on them. For instance, coal still accounts for a great share of Ukraine's energy source, making up 70% of primary energy consumption. Outdated technologies, such as improper filtration mechanisms and poor mine management in the industry field, are further challenging the GT path.

Energy dependency is one of the biggest technological constraints for the EaP. Most of the countries don't meet the national energy demand⁴, which makes them low self-sufficient countries and dependent on imported sources, mainly from Russia. In renewable energy sources, challenges are posed by outdated technologies. Meanwhile, in the energy refurbishment sector, issues arise from the old housing stock, which was constructed during the Soviet era (before the 1990s), and lacks energy-efficient building standards and certifications for construction materials. The refurbishment constraints stem from the absence of thermal points and outdated heating systems that do not allow for the regulation of heat consumption, coupled with urgent renovation needs. The municipal management companies lack the financial and technical resources to provide adequate maintenance for these systems (Republic of Moldova, 2023).

Additionally, insufficient monitoring systems poses an additional obstacle. Effective implementation of measures and the accurate assessment of their impact necessitate regularly updated data. For instance, in Armenia, forest issues are on hold due to inadequate data on the effects of climate change. Although some data covers 2-5 years, this time span isn't sufficient to provide a reliable analysis. The Measurement, Reporting, and Verification (MRV) system has been proposed by the Policy Beyond 2020 and countries are encouraged to implement it. Nevertheless, the implementation of such systems is challenged by the economic and financial gaps, due to their high investment cost and long payback periods.

Last but not least, the political instability of the EaP can be considered as a significant challenge for implementing the EGD. The recent conflicts in Ukraine and Karabakh have been a source of increased GHG emissions. Both conflicts were accompanied by the destruction of forests and green areas, land degradation, looting of mine-

⁴ National energy demand figures. Data source: <https://www.iea.org/reports/armenia-energy-profile/energy-security-2>

Armenia - covers 27% of energy demand with domestic energy production (2020)

Azerbaijan - one of the highest energy self-sufficiency ratios, with production exceeding demand almost four times

Belarus - In 2018, only 15% of the country's energy demand was met by domestic production

Georgia - energy production covers about one-fifth of its energy demand (21.1% in 2020)

Moldova - around 20% of its energy demand is covered by domestic production

Ukraine - nearly 65% of total energy demand is covered by domestic production

ral deposits, and environmental contamination from war debris and chemicals. On the other hand, political instability makes it difficult for the region to maintain a constant approach to implementing the EGD. It reduces the possibility of enforcing necessary regulations, as political focus shifts to immediate concerns of stability, and sidelines long-term environmental strategies. Moreover, as implementation of the EGD comes with financial requirements, its success largely relies on attracting investments in greener technologies and infrastructure. While instability can divert public attention, it can also undermine investor confidence, and make it challenging to secure the financial backing needed for green investments.

04

COMPARATIVE ANALYSIS EAP & WB

OVERVIEW

This chapter unfolds a comparative analysis of the WB and the EaP. Each region has previously been examined individually, with attention to their recent socio-economic and political developments, environmental and structural challenges arising from these developments, and their paths toward green transition, including the challenges and successes encountered. With these analyses now complete, it is essential to synthesize the findings to outline narratives that highlight shared or distinctive features between them. For this reason, the chapter is organized into four main sections which examines the regional context and socio-economic factors across the EaP and WB, identifies environmental challenges rooted in the years following independence, transition period, and the recent developments. Additionally, the policy framework and priorities within the two regions will be assessed to identify differences in policy approaches, focus areas, and strategies aimed at achieving GT goals. Finally, the discussion will include institutional capacities and governance systems to evaluate the feasibility of experience transfer from the WB to the EaP, and to provide the understanding of each region's status for the GT.

NAVIGATION THROUGH THE CHAPTER

4.1

*Regional Context and
Socio-economic Factors*

4.2

*Environmental
Challenges*

4.3

*Policy framework and
Priorities*

4.4

*Financial Mechanism
and Investments*

4.5

*Green Governance and
Institutional Capacities*

Regional Context and Socio-economic Factors

SECTION 4.1

FIRST YEARS OF INDEPENDENCE

The beginning of independence was an important starting point for both the EaP and the WB countries. This period followed the break-up of the Soviet Republic for the EaP countries and the Yugoslav Republic for the WB, leading to a complex transition that sparked conflicts across both regions. In the WB, the early years after gaining independence focused on building new states, guided by international conventions and agreements that helped to set borders. However, compared to the WB, the EaP had longer-lasting conflicts, which delayed the rebuilding process. A common outcome of these conflicts in both cases was the displacement of populations and the feeling of instability, which shaped the fragile societies with limited public involvement in state-building and governance.

The transition from socialist to democratic systems was a critical point for both regions. It required the creation of new institutions to ensure that the government was separate from party control and introduced market economies that differed from the centralized economic planning of the past. This period was challenging because of the need to implement fundamental reforms and administrative practices to move away from the institutional legacies of communism. The period was characterized by weak governance and limited institutional capacity. Countries struggled to simultaneously acquire the knowledge and strength for effective governance and at the same time deal with the impacts of recent conflicts. Challenges were mainly in the political and social areas.

TRANSITION PERIOD

The next phase, known as the transition period, saw both regions moving towards market economies, and was characterized by a rush to privatize state-owned assets and an increase in investments. Land privatization and economic reforms in the mid-

1990s aimed to stabilize the economy and attract foreign investment, which eventually led to the privatization of collective farms, services, manufacturing, and industry. This process exposed the lack of readiness of institutional bodies and the absence of solid planning frameworks, which was further intensified by corruption and informal practices. The impact of the privatization wave was the most visible in urban changes. Major cities faced gentrification, displacement, and changes to traditional urban spaces to accommodate the growing real estate market.

EU INTEGRATION

The period between 2005-2010 was a decisive time for both regions, when their paths began to diverge after 15 years of facing similar political, social, and governance challenges. The EaP countries of Belarus and Armenia leaned towards Russian politics, while Ukraine worked to free itself from Russian influence. On the other hand, WB countries began to secure spots on candidate list of EU membership. The WB initiated the EU integration much earlier than the EaP. The process for EaP countries was slower and affected by conflicts in Ukraine and agreements. Those developments eventually granted the candidate status to Moldova and Ukraine, and Georgia was recognized as a potential candidate. Thus, important difference between the EaP and WB emerges in their approach to EU integration; whereas the EaP also faces division among its members regarding their orientation (towards the EU or Russia).

Environmental Challenges

SECTION 4.2

Despite geographical differences, the EaP and the WB experienced similar developmental paths for the first 25 years post-independence (*Figure 14*). Each phase introduced environmental and socio-economic issues. During the formative years of independence, governance, and institutional capacities were frail, regulations worked for smoother transition and investments attraction, which lead to unregulated natural resource exploitation across the EaP and WB. Additionally, carbon-intensive industries with old technology and low maintenance, were another characteristics of this era.

The challenges were more intense in the transition period, due to smoother regulations and low institutional capacity. This period saw forest and land cover changes, biodiversity loss, urban sprawl, poor waste management, air and water pollution, and the persistence of carbon-intensive industries. Most of them have remained pertinent into recent years.

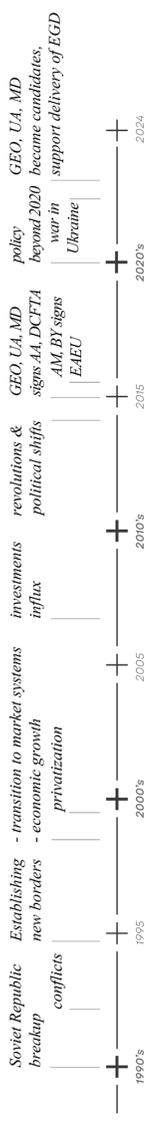
Urbanization and the shift to capitalism notably impacted the ecology. Market reforms led to widespread privatization, transformed urban areas and put pressure on public green spaces. On another hand, housing developments resulted in spatial expansion and an urban sprawl. The lack of comprehensive urban planning and inadequate monitoring rose the illegal constructions, while existing housing stock deteriorated due to insufficient funding for renovations. This put primary pressure on infrastructure like heating, water, and waste management systems. Mass privatization brought some negative consequences in the natural and rural as well. Privatization led to land degradation and maintenance challenges due to fragmented land ownership.

Air quality and contamination in both regions were mainly due to transportation and industrial activities. Mining and manufacturing plants, mainly utilized low-quality coal, contributed to increased emissions and air contamination. Concerning the transportation system, the issue is linked to the importation of second-hand, aged, and highly polluting vehicles, mainly sourced from the EU and chosen for their affordability. An increased motorization rate, along with a low quality of fuel, became the major sources of air contamination and health problems in the regions.

The initial 25 years of development post-independence have brought up similar

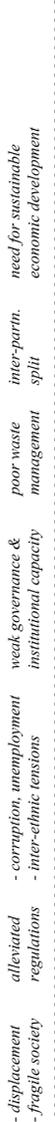
CORE EVENTS

EASTERN PARTNERSHIP

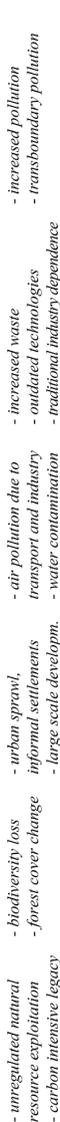


PERIOD

SUBSEQUENT CHALLENGES



ENVIRONMENTAL CHALLENGES



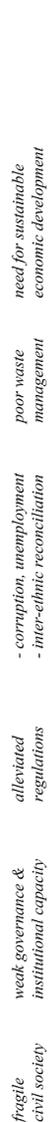
CORE EVENTS

WESTERN BALKANS

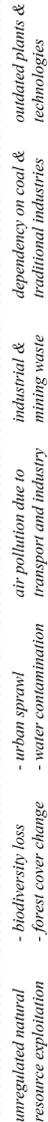


PERIOD

SUBSEQUENT CHALLENGES

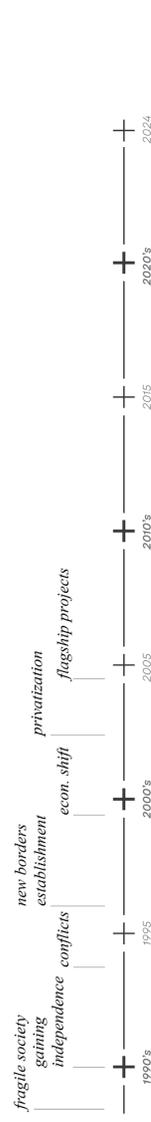


ENVIRONMENTAL CHALLENGES



CORE EVENTS

INTERSECTION



GENERALIZED PERIOD

ENVIRONMENTAL CHALLENGES

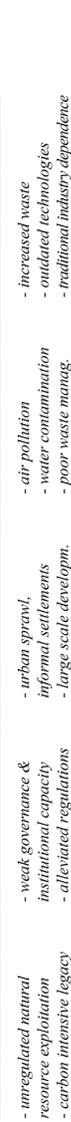


Figure 15: Temporal Analysis: Interconnected Timelines of the EaP & WB

environmental challenges for both regions. Despite the 10-year lag in the start of EU integration process between the regions, they continue to face with similar environmental and governance issues. Among these are air and water pollution, increased waste, reliance on coal and outdated technologies.

A dominant challenge, more pronounced in the WB, is the dependence on coal. Coal is the primary fossil fuel in the WB, supporting traditional industries, especially thermal power plants (TPPs). Despite some attempts at updates, these power plants remain less efficient and more outdated than their EU counterparts. The inadequacy of air filtration and wastewater treatment systems in these plants presents challenges to environmental and lead to cross-contamination of water and soil. However, these traditional industries are the major employment providers in the regions, which increases the social vulnerability for the shift toward greener alternatives.

Additionally, both regions are encountering growing challenges related to industrial and mining waste (mainly a legacy of the transitional period). Landfilling is the dominant waste management strategy and illegal dumping is the problem across practically all EaP and WB countries. Municipal waste collection is insufficient especially in rural areas, while outdated waste facilities, along with abandoned, illegal, and poorly managed landfill sites, further intensifies the waste management challenges.

Water quality and sanitation present additional challenges. Decaying infrastructure intensifies the situation and leads to the cross-contamination of water between sewage and fresh water systems. Many large cities lack adequate wastewater treatment facilities, while in rural areas, service systems are often completely absent. Despite allocated funds and progress in the development of wastewater systems, the steps remain insufficient in most countries.

Lastly, the trend in CO₂ emissions presents a shared challenge, albeit more acutely in EaP countries. While medium and smaller-sized countries in these regions contribute less to global climate issues compared to more developed nations, their CO₂ output, when considered in relation to their economic output, positions EaP and WB countries as disproportionately high contributors to GHG emissions within the EU 27. This highlights the need for increased efforts towards policy reforms in these regions.

Policy Framework and Priorities

SECTION 4.3

In terms of policy framework, EaP and WB have different approaches to govern the GT. Based on previous analysis, we can see that both regions have been influenced by the EU's environmental directives and global commitments, mainly due to their commitment to accession requirements. The approaches to the GT showcase both regions' commitment (although more coherently in WB) to aligning with the EU acquis in the environmental sector. The WB has a newly emerged Agenda for the WB aligns with the objectives outlined in the EGD and is specifically tailored for the region's environmental, economic and political context. On another hand, although such a specifically tailored agenda is absent for EaP, it participates in different EU funded initiatives ('EU4Climate', 'EU4Environment'). Under the umbrella of the EU's EaP, have developed national and regional strategies that reflect their commitment to climate action, albeit with varying degrees of integration. Those initiatives are also aligning with the EGD by sharing common goals of achieving lower emissions and the greener future. However, currently the policy beyond 2020 is the closest stand initiative that directly supports the EGD's delivery.

4.3.1 Target areas & goals

As highlighted in the second chapter, the WB approach to policy implementation benefits from the processes of EU accession. This has translated into initiatives across the region, such as implementation of EU-aligned energy efficiency measures, air and water control, biodiversity protection and so on. More specifically, the GAWB Action Plan is organized to align with the 7 components of Climate Action, Energy, Transport, Circular Economy, Pollution, Sustainable Agriculture, and Nature and Biodiversity Protection, which are grouped into 5 pillars (decarbonisation, circular Economy, depollution, sustainable agriculture and protection of nature and biodiversity). While the GAWB serves as a framework solely focusing on GT, for EaP the Policy beyond 2020 is the closest associated with shared commitments with EGD. However, among five objectives, only one of them serves as the pillar of

environment and climate resilience. As part of the environmental pillar, following actions are envisaged: reducing energy consumption and investment in sustainable energy, gaining access to water services, monitoring and improving the air quality in certain cities, and building priority roads and railways.

Comparison among WB and EaP's target areas gives the possibility to conclude that both region's focus is on *energy security*, efficiency and renewables with modernizing energy legislation and regulatory frameworks for investment mobilization. For instance, the agenda assists WB countries in the preparation of National Energy and Climate Plans, which would help to target sectors with highest emissions and energy saving potential. Region also promotes renewable energy investments, such as feed-in tariffs and subsidies for energy efficiency improvements. EaP countries, while also prioritizing these areas, have set varied renewable energy targets as part of their national energy strategies, which emphasizes the role of renewables in their future energy mix. They are promoting increasing energy efficiency of buildings and reduction of coal share, similarly to WB. For instance Ukraine adopted Energy Strategy 2035 and the National Plan for 2030 to increase the number of net-zero buildings. However, it should be mentioned that compared to WB, EaP lacks the unified commitment for regional energy strategies and the commitments are mainly based on national level. They also face challenges in regulatory and market conditions for attracting renewable energy investments.

The transport sector is one of the main sources of GHG emissions in both regions. Therefore, it has been a priority with diverse policies in this field. For instance, GAWB focuses on an increase in rail capacity and the deployment of environmentally friendly transport modes, particularly in urban areas. The EaP also prioritizes major roads and railways. Sustainable transport oriented initiatives work in both regions to reduce the carbon footprint associated with transportation and prioritize ecological solutions.

For *Depolluting Air, Water, and Soil*, although attention is given in both cases, in WB the cornerstone of the depollution objective is the alignment with EU environment acquis standards, While in EaP this implication is weaker. Otherwise, both regions address this challenge by introduction and modernization of monitoring systems.

Regarding the *Protection of Biodiversity and Ecosystems*, EaP's initiatives are dispersed across diverse initiatives, such like EU4Environment. While in WB they are represented and organized across the GAWB and include measures to preserve habitats, implement action plans, develop and implementation of the WB 2030 Biodiversity Action Plan. In EaP the measures mainly include tackling deforestation and desertification and introducing measures to protect and manage protected areas. Thus, the roadmap and specific plans for achieving this objective is a bit unclear in case of EaP.

Lastly, for the *Sustainable Agriculture and Food Systems* the WB measures are mainly influenced by the EU accession and implementing respective regulations, such as compliance with food safety and animal welfare regulations to minimize waste and

ensure responsible production practices. Whereas the EaP has a weaker common vision in this field.

In conclusion, WB has demonstrated a more unified approach to policy implementation, and benefits from structured EU accession processes. While in case of EaP this approach is fragmented due to inter-partnership split. The most distinguishing factors in WB and EaP policy priorities arise in sustainable agriculture and food systems and depollution. Both regions' focus is set on Energy and transport, which are the highest CO₂ contributors. Target areas and strategies are similar by putting focus on renewables, building refurbishment, increasing railway capacity and sustainable transportation modes.

4.3.2 Challenges & Barriers for implementing policies

In terms of challenges and barriers for implementing policies, several overlapping and unique regional factors arise. Both regions face institutional weaknesses that impede effectiveness of GT measures. In the WB, a rapid transition failed to establish powerful institutions, which created a capacity void of governance, as detailed in the "Report on Western Balkans Just Green Transition Conceptualisation". Similarly, the EaP struggles with fragmented institutional frameworks, with National Reports highlighting an absence of dedicated units for climate change in countries like Georgia and Azerbaijan. This leads to scattered efforts and the less effectiveness of GT policies.

Financial limitations is the factor that significantly impedes the GT across both regions. In the WB, experts have highlighted a preference for grants over loans, which points to concerns about economic uncertainty. The EaP faces similar constraints, where limited funding impacts essential services like waste management and water treatment, as noted in national reports from countries like Armenia and Moldova. Both regions struggle to attract investments to overcome basic needs and attract potential investors.

Societal preparedness and stakeholder engagement are critically low in both regions. The WB's historical centralization has weakened public participation, as confirmed through low stakeholder engagement scores in interviews where respondents rated involvement at 1 to 2 out of 5. With a similar historical context, the EaP also shows weak public engagement, which as evidenced by the EU4Climate reports, is increased by inadequate information sharing on GT and environmental risks. This undermines the legitimacy and acceptance of GT initiatives.

Moreover, both regions are burdened by outdated and carbon-intensive industries. The WB's reliance on coal and the EaP's struggles with illegal logging are indicative of *environmental management issues*. *Technological constraints* are also prevalent; for instance, the EaP's utilization of Soviet-era energy systems hampers the adoption of cleaner technologies.

Political instability also affects both regions but manifests differently. In the WB, fre-

quent shifts in political and administrative leadership hinder the continuity and effectiveness of environmental strategies. In the EaP, varying political orientations influence the EU integration and the GT. Additionally, issues of corruption and lack of transparency, highlighted in interviews and governance reports, pose further obstacles to policy implementation across both regions. Related to the political unreliability, the WB faces the brain drain which leaves a gap in necessary expertise for GT. This issue was particularly noted during interviews with local experts who highlighted the ongoing loss of skilled force, as a barrier to the SD. Conversely, the EaP's political fragmentation, particularly between countries aligned more closely with EU versus those less committed, creates uneven progress in GT. This division is sharply illustrated by different levels of engagement and implementation in EU-aligned initiatives, as detailed in EU policy review documents.

4.3.3 Strategic gaps & Overlaps within the Policy Frameworks

The weak alignment of environmental objectives with broader economic and social planning is one of the strategic gaps within the policy framework. As noted in regional policy documents and expert discussions, it often leads to fragmented and inefficient implementation of green initiatives and eventually limits their impact. In the WB, for instance, the "Report on Western Balkans Just Green Transition Conceptualisation" highlights the lack of strategies that integrate just transition principles into spatial planning. This results in missed opportunities to address environmental and social disparities in a holistic manner. In the EaP, as indicated by several National Communications, there is a pronounced gap in embedding climate change mitigation within economic development agendas, particularly in sectors like agriculture and energy, which are pivotal for the region's sustainability.

On the other hand, there are areas of overlap that could be better utilized to strengthen regional cooperation and increase the efficiency of resource allocation. Both regions share a strong emphasis on enhancing energy efficiency and expanding the use of renewable energy sources. These common goals present opportunities for sharing best practices, pooling resources, and coordinating investments, which could be facilitated through existing frameworks like the Energy Community and regional EU-funded initiatives

interviews with local experts who highlighted the ongoing loss of skilled force, as a barrier to sustainable development. Conversely, the EaP's political fragmentation, particularly between countries aligned more closely with EU directives versus those less committed, creates uneven progress in GT efforts. This division is sharply illustrated by different levels of engagement and implementation in EU-aligned initiatives, as detailed in EU policy review documents

Financing Mechanisms and Investments

SECTION 4.4

Both the EaP and the WB benefit from the EU funding instruments, yet their approaches to accessing and utilizing these funds are distinct. Similarity lies in the structured financial system, which is organized across three levels to cater to international, regional, and local GT needs. At the international level, International Financial Institutions (IFIs) such as the European Bank for Reconstruction and Development (EBRD), World Bank, and the European Investment Bank (EIB) play a big role. These institutions also provide technical assistance for large-scale projects in energy efficiency, waste management, and sustainable development.

The funding strategies for both regions are encapsulated in the Multiannual Financial Framework (MFF), which includes the IPA for the WB and the Neighborhood Development and International Cooperation Instrument (NDICI) for the EaP. Both instruments aid regions to aligning with EU standards and fulfill the GT objectives. Funding priorities reflect the regional policy priorities and include: energy efficiency, renewables, environmental protection, and climate change adaptation.

The difference in funding opportunities lies in the structure of their green agendas. The WB follows a structured plan under the GAWB, which has dedicated support and specific objectives. This contrasts with the EaP's approach, which appears less centralized and lacks a cohesive agenda. Additionally, the WB benefits from targeted initiatives like the IPARD, focusing on sustainable agricultural and rural development, and the WB Investment Framework (WBIF), which is tailored to the region's unique challenges. Conversely, the EaP relies on broader EU programs such as EU4Environment and EU4Energy, which has a more generalized strategy.

While both regions' commitments to the GT are supported by EU funding, the structural differences are apparent. The WB's more centralized agenda, with a focused emphasis on energy, infrastructure, and agricultural sustainability, contrasts with the EaP's broader and less centralized approach.

Green governance and Institutional Capacities

SECTION 4.5

The governance system (*Figure 16*) designed for the implementation of the GAWB is based on the foundation of regional collaboration, multi-stakeholder involvement, and cross-sectoral integration. At the core of this system is the emphasis on regional ownership, achieved through the engagement of WB authorities across various pol-

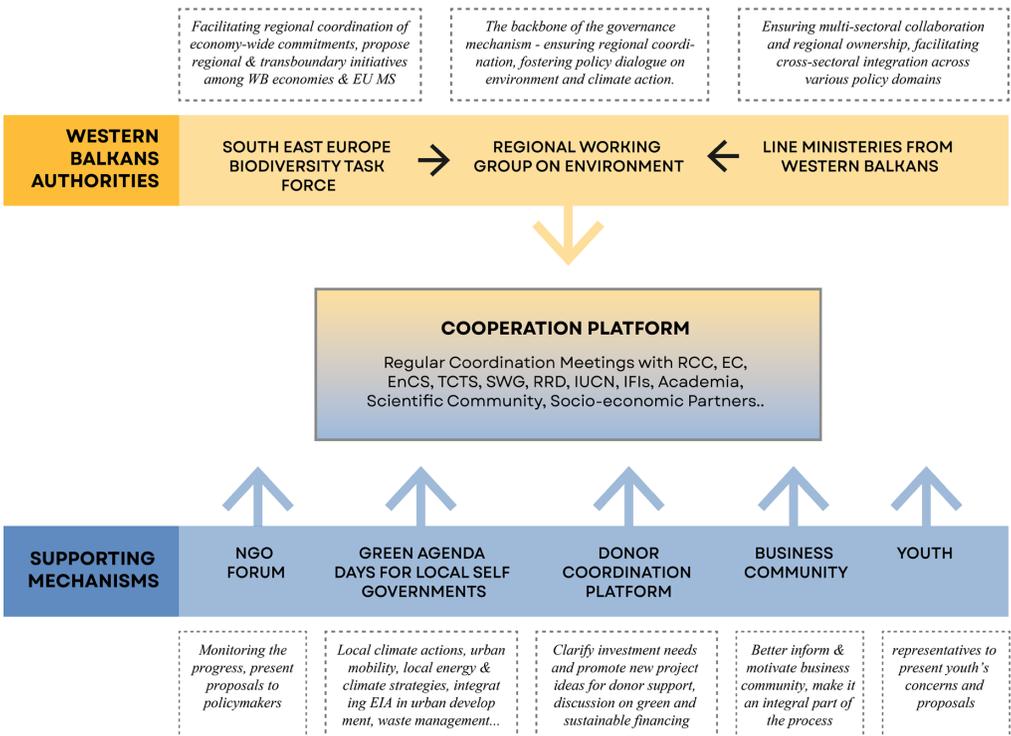


Figure 16: GAWB Governance scheme

icy domains. This is operationalized through the Regional Working Group on Environment (RWG Env), an intergovernmental platform that promotes permanent policy dialogue on environmental and climate action. The RWG Env, together with other regional coordinators responsible for different facets of the action plan. This forms the pillar of this governance mechanism, which is supported by the South East Europe Biodiversity Taskforce. The latter advises on biodiversity matters and ensures a broad-based regional stakeholder involvement.

Important aspect of the governance mechanism is the cross-sectoral collaborations, facilitated by the RCC. This includes a shared Cooperation platform for WB authorities, European Commission, regional organizations, and other relevant stakeholders, and secures an informed decision-making process based on the latest policy developments and alignment needs. Platforms like the Non-governmental Organisations' Forum and the Green Agenda Days provide space for knowledge sharing and vertical coordination and helps to incorporate diverse perspectives at different levels of governance. Lastly, the Donor Coordination platform set up annual meetings to streamline financial support, identify priorities, and discuss financial needs.

Strong regional cooperation among WB countries could be considered relevant for addressing transboundary environmental issues. While the inclusion of a range of stakeholders (from governmental bodies to NGOs and international financial institutions) gives advantage for creating more inclusive environmental policies. Regarding the communication framework, regular operational and ministerial meetings and reporting mechanisms, help for better transparency for implementation and provide a platform for progress assessment.

In order to have a common framework for comparison of the governance mechanisms, in case of EaP, the closest policy stand to EGD was chosen - beyond 2020. There the governance is managed through a collaboration involving high-level summits, official meetings, and civil society forums. Key components include the Summits of the Heads of State, meetings of officials, the EaP Civil Society Forum, specialized panels and working groups on environment and climate change. These forums serve for policy dialogue, integration of society inputs, and implementation of specific initiatives. The normative regulation is supported by joint working documents and declarations on climate change.

While both regions share a commitment to engage a wide range of stakeholders, their methodologies and structures are different. The WB's governance system has a highly structured approach that emphasizes regional ownership and engagement of WB authorities across various policy domains. They have a more structured cross-sectoral collaboration that supports the alignment with the latest developments and needs. Contrastingly, the EaP's governance framework lacks the centralized coordination mechanisms. Their strategy is managed through high-level summits, official meetings, and the EaP Civil Society Forum. This approach appears broader and less targeted compared to the WB's.

Divergence in governance structures underscores a difference in the orientation of each region's GT efforts. The WB's centralized and coherent agenda positions it to better address regional environmental challenges with a targeted approach. In contrast, the EaP's broader governance model, while offering flexibility and inclusivity, may face challenges in achieving the same level of coherence and targeted effectiveness.

While both regions face issues such as low development levels and corruption, their approaches to governance, securing investments, institutional and administrative capacities, differ in some ways. In terms of governance, institutional, and administrative capacities, the EaP faces challenges due to the absence of dedicated state institutions or working groups specifically focused on climate change. This leads to responsibilities being spread among officials who are tasked with multiple duties. The WB also encounters similar challenges, however it's more actively involved in EU supports to build institutional capacities.

Another important point is the regulatory framework governing the climate action. The EaP has a fragmented approach due to the lack of a unified regulatory framework, which leads to weak coordination among public agencies and the less coherent national and transnational GT strategy. Conversely, the WB, with its tailored Green Agenda has a more unified strategy for implementing EGD measures.

In terms of the financial coordination, the EaP's challenges are due to absence of clear measures at the national and regional levels, which makes harder to explore sources for climate action. This contrasts with the WB's implementation of a Donor Coordination platform, which organizes annual meetings to streamline financial support, identify priorities, and facilitate dialogue on financial needs.

In conclusion, while both the EaP and WB face challenges in for the GT, the WB's approach - characterized by better utilization of EU support, a centralized regulatory framework, and effective financial coordination - offers a more coherent and potentially successful path. The EaP's fragmented approach, with spread responsibilities, lack of a unified regulatory framework, and challenges in financial coordination, underscores the need for changes to better implement the GT strategies.

05

**SYNTHESIS OF
LESSONS LEARNED
& GT FRAMEWORK
DEVELOPMENT**

OVERVIEW

Chapter 5 synthesizes the lessons learned from the comparative analysis between the WB and the EaP, as explored in previous chapters. With an ultimate aim to integrate these insights into a framework for future policy-making and strategic planning in the EaP's Green Transition - it begins by detailing successful GT practices from the WB, and provides recommendations of how to adapt them within the EaP context. Thus, the chapter sets the stage for discussions on lessons that should guide future policy design phases and strategic framework development in the EaP. These lessons are categorized across the four phases of preparation, planning, implementation, and monitoring.

The next part of the chapter is dedicated to the development of the general conceptual framework for the GT. It divides the roadmap into four stages and explains each one in detail. As a crucial part to the process of examining how this general framework can be applied in the EaP context, the narrative goes back to the regional peculiarities, such as political instability, economic restrictions, and different levels of EU integration. The chapter then compares the WB to the subject and explains how it is possible to construct more effective and resilient green policies by understanding these challenges. Ultimately, the study looks into the feasibility of the proposed framework in the EaP and offers adjustments to the roadmap, ensuring that it is adaptable and capable of increasing the region's capacity for a GT.

NAVIGATION THROUGH THE CHAPTER

5.1

Successful Practices from the WB & Recommendations for EaP

5.2

Green Transition Roadmap Development

5.3

Understanding Regional Specificities & Framework Applicability to the EaP

5.4

Limitations

5.5

Future research perspectives

Successful Practices from the WB & Recommendations for the EaP

SECTION 5.1

The section starts with general recommendations on the development of the GT framework. Next, it will elaborate on specific strategies inspired by the WB experience that can be integrated into this framework. The initial phase involves establishing a generalized framework to guide the future approaches in EaP. Broader lessons are categorized across the four phases of preparation, planning, implementation and monitoring. For the first phase of preparation, one of the adjustment priorities are steaming from the political and economical fluctuation. Recognizing the root of the most challenges, it's important to consider them in policy formulation, that should be resilient towards the socio-economic and political dynamics. Another key lesson for the EaP is the importance of tailoring environmental policies to local conditions and needs to ensure that policies are relevant to address the specific environmental, social, and economic contexts of each country or region. However, the success of GT policies largely relies on active engagement and inclusion of all stakeholders, including governments, businesses, civil society, and academia. Based on WB experience and expert interviews, EaP should consider developing mechanisms for inclusive decision-making, where stakeholders can contribute to policy formulation and monitoring. It involves building capacities among stakeholders to meaningfully participate in the GT process, rather than formal consultations.

In the forthcoming stage of planning, several lessons could be taken into consideration. The WB case shows that the economic limitations are the main factors that limit the implementation of GT policies. For EaP countries, where economic challenges are pervasive, integration of GT strategies with economic development plans can have a double benefit: It can create economic growth and simultaneously meet the environmental goals, and the other way around - integration of economic incentives into environmental policies can increase their acceptance and make the initiatives more attractive to the policymakers and the public.

Building on the WB experience, EaP policies should incorporate measures to protect vulnerable and marginalized communities, address environmental justice and ensure that GT measures do not exacerbate existing inequalities. Moreover, considering the EaP summary regarding the political instability and emerging conflicts, it's important to highlight the crisis management and resilience building, and tailor adaptive policies that can respond to unforeseen challenges, among them - those brought about by climate change. Therefore, strategies should ensure that GT policies are flexible enough to withstand socio-economic shocks.

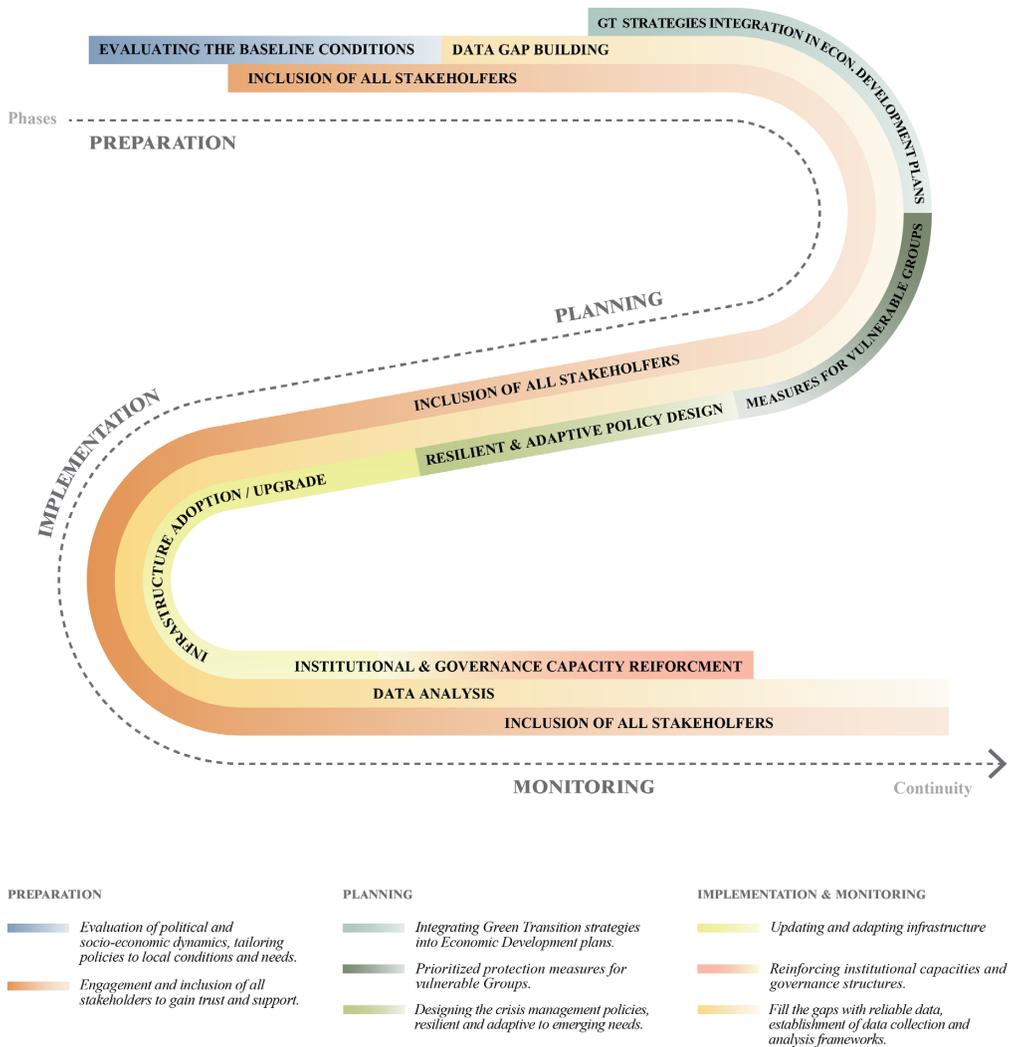


Figure 17: Generalization of recommendations for the GT Framework Development

Furthermore, while WB continues to experience challenges in waste management and water treatment systems, it becomes evident that infrastructure upgrades are critical for the implementation phase. Significant investments are required to make these upgrades, yet by its mean it's possible to address immediate environmental concerns and lay groundwork for the adaptation of further practices. While funding of these initiatives is just one aspect, there is also a need for enhanced institutional capacity and governance structures to effectively execute and maintain them. This could involve training programs for policymakers and public administrators focused on green policies, as well as the establishment of dedicated environmental agencies or committees.

Besides that, the filling of the data gaps is the most important factor for the initial, planning, implementation, and monitoring phases. The interviews and reports show that the unreliable data was a major challenge to the implementation of the policies and initiatives in the WB. Hence, the formation of the data collection and analysis procedure is the key factor for the EaP. Among the requirements are the investment in technological infrastructure that will allow the monitoring of environmental impacts and policy outcomes and thus provide data that can be used for policy improvement.

RECOMMENDATIONS FROM WB PRACTICES & STRATEGIES

Building upon this foundation, it is now possible to elaborate on specific strategies, policies, and actions within the WB that have been successfully driven by the GT. Conversely, this section will discuss the root reasons why certain practices have been challenged in the region. These strategies will be aligned with the broader framework to ensure coherence and relevance to the specific context. For this purpose, the part will rely on interviews with regional experts, as well as the Report on Western Balkans Just Green Transition Conceptualization and the GAWB Action Plan Implementation Report.

Theoretical frameworks for adaptation of Place-Based and Inclusive Approaches

The conceptualization report and expert interviews have shown that the adaptation of place-based and inclusive approaches is the priority. To adapt these approaches and design the governance that is suitable for inclusive decision-making, there is a need to involve different approaches, thoughts, and designs. For this aim, the part will depend on the interviews with regional experts, as well as the Report on WB JGT Conceptualization and the GAWB Action Plan Implementation Report.

As per the evaluation of experts, adoption of smart specialization and place-based innovation strategies is a rising trend in the region. These strategies use the local entrepreneurial skills to foster innovative GT initiatives and are an important part of the process of adapting governance to the local context and needs.

Furthermore, the Quintuple Helix approach is considered to be a strategy that connects the environment to the decision-making processes. This model illustrates the co-design process where different stakeholders (including the environment) are ac-

counted in governance frameworks. This ensures a more holistic approach to sustainability.

The WB have been focusing on developing place-based and inclusive approaches that are based on the local strengths and stakeholders' engagement. Inclusion of theoretical frameworks in policy design could be a model for other regions who are planning to implement their own sustainable transitions. The EaP can use the same method and motivate the local governance bodies to form the GT strategies that are tailored to the regional features and are adapted rather than imported.

Financial Strategies and Economic Incentives

The WB experience shows that the financial constraints, especially the dependence on external funding and the problems of the EU funding mechanisms, prove the necessity of financial planning improvement. As per the GAWB implementation report, although the plans for the seven thematic roadmaps were ambitious, the actual progress was uneven because of the delays in implementation and the difficulties in getting enough funds. Nevertheless, there are some practices in the WB that could be adopted by the EaP.

The GAWB governance model imposes the Donor Coordination Platform, which is a crucial tool in the management and the optimization of the funding for the agenda. It links the funding sources with strategic needs and makes sure that the financial resources are used in an efficient and transparent way. This platform works as the central hub for the gathering and distributing funds from different international donors - thus, avoiding the duplication of funding on similar projects and making sure that every initiative gets the required financial support. Besides, the platform increases the transparency of the funding process by providing a clear overview of where and how funds are spent. Essentially, it centralizes and rationalizes funds management and ensures that funding is both adequate and aligned with environmental goals, thereby improving the governance of financial resources to support the GT initiatives in the region.

Furthermore, expert interviews highlighted the priority of diverse funding sources, including public-private partnerships, EU funds, and innovative financing mechanisms such as green bonds or environmental taxes. Diversifying funding sources and reducing dependence on a single funding stream could be a prerequisite for financial resilience, as this approach decreases financial risks - if one source fails, others can fill the gap and maintain continuity. For more specificity, PPPs bring together the efficiency of the private sector with the public sector's regulatory support and social mandate, which can potentially generate solutions that neither sector could achieve independently. Likewise, innovative financing mechanisms of green bonds can attain a wider cycle of investors and mobilize capital flows. Environmental taxes could also be applied to generate steady revenue streams that can be reinvested in further initiatives to create a self-sustaining cycle of investment in sustainability.

Stakeholder Engagement Techniques

As per the GAWB Implementation Report, the public consultations and workshops are the means employed to involve various groups of stakeholders such as government bodies, academia, and NGOs. These platforms are the means of information exchange and allow for collaborative policy development.

The GAWB Action Plan presents multi-stakeholder forums, which bring together representatives from the civil society, public and private sectors to discuss progress and coordinate future actions. These forums tend to improve participatory decision-making processes by integrating stakeholder feedback directly into policy design and ensure that strategies are reflective of the community's collective needs. Additionally, the Action Plan highlights capacity-building initiatives designed to bridge knowledge gaps by providing local stakeholders with the skills needed to manage and implement green technologies. Altogether, ensures that policies are supported by the communities they affect and suggests a practice that can be mirrored in the EaP to improve the quality of GT strategies.

Besides, the stakeholder engagement activities should be aligned with local cultural norms of EaP countries, so that the processes are considerate of specific communication styles. This could be done through designing public awareness and educational campaigns that are culturally sensitive and resonate with local values and traditions. As well as encouraging community-led environmental initiatives that align with regional customs and encourage more participation and co-ownership. Such inclusive practices are expected to improve the acceptance and the legitimacy of policies, build trust in fragmented societies, and eventually ensure societal support for GT initiatives.

Inclusive policy-making and public awareness

The experts have stressed the participatory policy-making processes that include all stakeholders, such as the local communities, NGOs, businesses, and the academia. For that the first step is to launch public awareness campaigns to increase understanding and support for the GT process and train the workforce for building societal support and operational capacity.

A success story of this is the Skills Development for Employment (SD4E) program in Albania, which illustrates the importance of integrating requalification, awareness, and stakeholder involvement in employment strategies. It's aligned with the National Employment and Skills Strategy and serves to enhance vocational education and training (VET) through legal and institutional reforms. SD4E also prioritizes raising public awareness and building institutional capacities, and ensures that educational offerings are aligned with local needs and European standards through the VET providers.

Collaborating Diverse Political Alignments and EU Integration Levels

The diversity in EU integration and varying political alignments, as previously discussed, could potentially hinder the GT process. Therefore, it is crucial for EU policy frameworks directed at the EaP region to be adaptable and foresee the variable degrees of integration. They should be designed in a modular way, where countries can participate at different levels according to their present political alignment and integration objectives. Hence, the establishment of forums and platforms that motivate dialogue and consensus-building among EaP countries is suggested. These platforms can be used to share the best practices, to discuss the common challenges, and to develop a sense of regional mutual trust for sustainability efforts.

Besides, regional projects that require cooperation, such as cross-border environmental monitoring and management initiatives, should be encouraged as they could serve as neutral ground to promote cooperation without necessitating full policy alignment with the EU. Incentive mechanisms, such as regional awards or grants for the collaborative environmental projects, could be adapted to motivate countries to work together in achieving the common environmental goals and shared benefits.

Enhancing Regional cooperation

Regional cooperation can amplify the individual country's impacts and provide a cohesive approach to common challenges. For that reason, the recommended strategy for the EaP is to establish a regional framework for cooperation, which can allow for the sharing of best practices, data, and resources. A success story and model of this in WB is the RCC. Its holistic approach includes monitoring, donor coordination, partnerships, and communication to achieve socio-economic development and regional coordination across diverse sectors (Petra Balazic, 2022).

More specifically, the RCC job includes the establishment of monitoring and reporting mechanisms such as the Balkan Barometer and SecuriMeter in the WB. It ensures that initiatives are responsive to the regional needs and include diverse stakeholders. It promotes and implements projects aligned with the SDGs, and optimizes resource use. The RCC's approach to form partnerships across sectors - ranging from NGOs to international organizations - incorporates diverse perspectives into regional initiatives and strengthens their relevance. Furthermore, the Communication Strategy strengthens its rolepromotes the benefits of regional cooperation and EU integration. This framework could serve as a blueprint for the EaP by providing a structured approach to share best practices, data, and resources effectively - and ultimately foster a cohesive regional response to environmental challenges.

GT Roadmap Development

SECTION 5.2

Having analyzed the best practices and recommendations from the experience of the WB, there is the need to once more rescale the focus toward having a broader view of how the process of GT is established. The structure of the section will follow the previously established rules of breaking down the road map into sequential preparatory, planning, implementation, and monitoring steps.

The preparation phase opens up with the evaluation of existing institutional resources and capacities, based on which the core team will be defined. Stakeholder involvement should also be planned and prescribed from this initial phase. The next step is the contextualization of GT - a “redevelopment model based on locally designed public policies”(Alexandru Mustață, 2021). At this stage, local knowledge and expertise are invaluable, and thus, it is essential to involve diverse stakeholders who possess local expertise and can incorporate various perspectives.

The further step is the definition of baseline situation, which includes the evaluation of current environmental and socio-economic conditions in specific context. The outcome of these assessments will help to establish a factual basis for setting priorities, formulating policies, and monitoring progress. Integrating these data will give the possibility to address the unique challenges and opportunities of the region, ensuring that subsequent steps in the GT process are grounded in reality and strategically focused.

The subsequent steps encompass the data analysis process, where potentials and challenges need to be evaluated for the GT process. This involves an assessment of the data's availability and volume, which runs parallel to the main process. Depending on the adequacy of the data, this phase may dictate the need for gathering additional information or, if sufficient, proceeding with socio-economic and environmental assessments. This will set the stage for identifying the specific needs, challenges, and opportunities that will shape the subsequent stages of the planning process.

The *planning stage* opens with identification of benchmarks and successful GT models in order to set realistic and achievable targets. This could help to establish measurable standards that guide progress evaluation, while successful models inform

better strategies. This dual approach ensures that targets are adapted to local contexts and enhances their relevance and feasibility.

The next step involves defining priority areas tailored to specific contexts, informed by prior data analysis and stakeholder input. This process is inherently participatory and reinforces stakeholder engagement in parallel with priority setting. By utilizing bottom-up approaches, this stage integrates the perspectives of communities, local citizens, vulnerable groups, employers, and governments, ensuring that all voices are contributing. The circular nature of this process allows for continuous integration of local experience and knowledge and moves away from a traditional top-down approach.

After stakeholders' visions are integrated into the definition of priority areas, consensus building becomes essential to unify understanding and align on core strategies. The consensus forms the foundation for drafting policies where specific goals are aligned with established priorities. Policy formulation should detail the responsible entities, set clear timeframes, outline expected outcomes, and define strategies for supporting vulnerable groups. Following these specifications, it is important to align these policies with regional economic development plans and the objectives of the EGD. It paves the way for the final step in the planning phase: developing the implementation plan - which should clearly specify tasks, assign responsibilities, establish deadlines, and allocate resources needed to achieve the GT objectives.

Once the policy draft is finalized and the implementation plan is in place, the project moves to the *implementation* stage. At this point, the focus shifts to the redevelopment model where capacity-building programs are essential tools. These programs are designed to train and reskill local institutions in new technologies and practices. Parallel to the reinforcement of institutions, there is a need to strengthen the community engagement as well. For this, educational programs should be implemented to present awareness-raising campaigns and promote community-led initiatives.

Despite the financial resources allocated under the EGD, additional funding is necessary to support further infrastructure development projects. Thus, in the implementation phase, mobilizing financial instruments becomes a priority step to ensure smooth progression and prevent disruptions in ongoing projects. Once a stable financial flow is established, they can be redirected towards essential infrastructure development projects.

In the *monitoring* phase, a top priority is establishing a performance matrix to track progress and launch necessary adjustments. This phase mirrors the circular approach of the planning stage, where stakeholder feedback and matrix data mutually inform ongoing assessments. Continuous feedback loop allows for the timely adjustment of policies or prepares them for future periodic reviews based on the inputs. This systematic approach ensures that policies stay relevant and effective across varying contexts and communities, and dynamically adapt to emerging needs and outcomes.

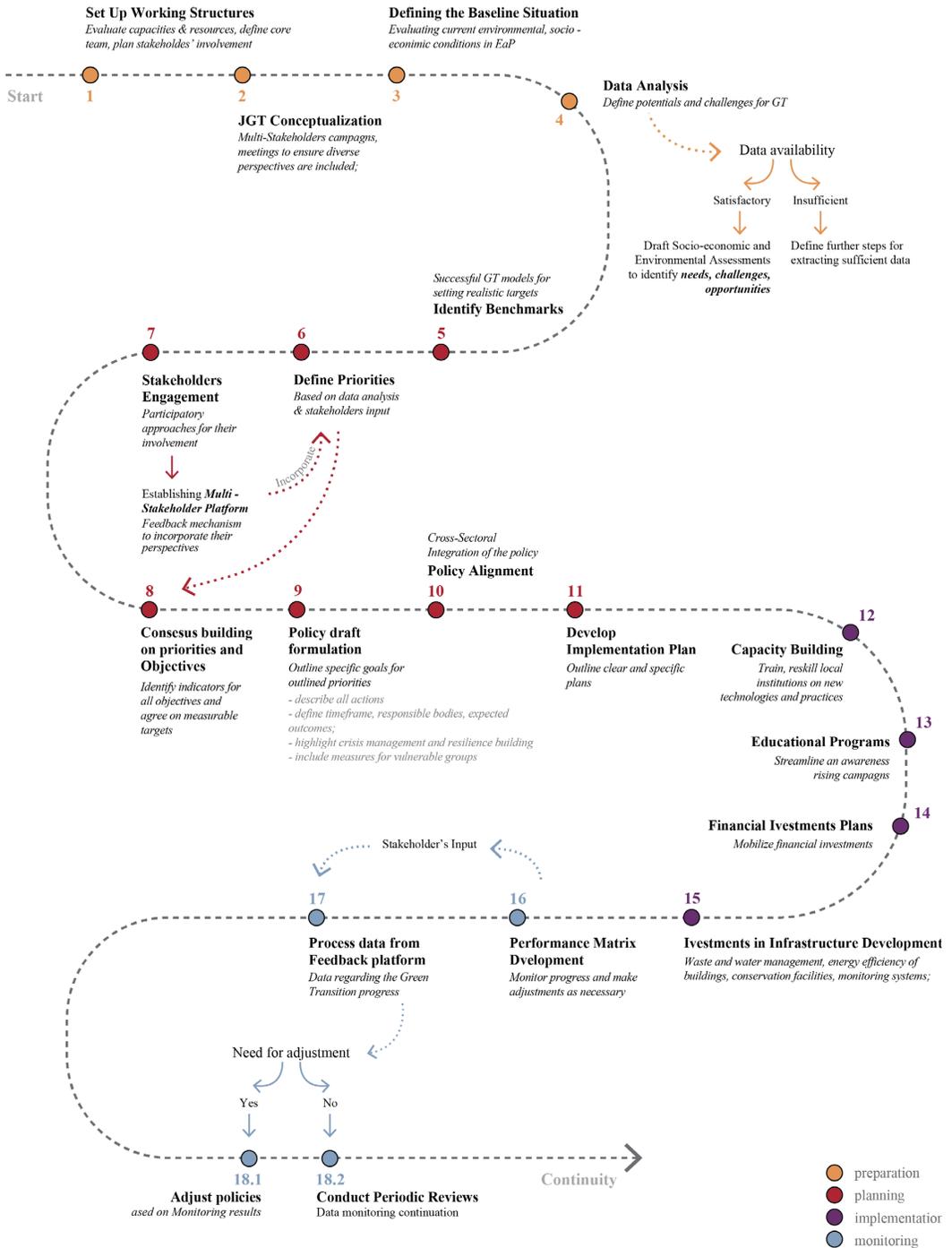


Figure 18: Generalized GT Roadmap

Understanding Regional Specificities & the Framework Applicability to EaP

SECTION 5.3

5.3.1 EaP Regional Specificities

Before pointing to specific policy recommendations within the GT roadmap, it is important to recap the regional specificities and challenges that EaP countries face. As analyzed in Chapter 3, there are certain complexities that could impede the region's transition efforts. Among them, the highest potential risk is associated with frequent governmental shifts, political instability, and tensions with neighboring states, that might lead to unsustainable commitment to GT initiatives.

From a broader political perspective, EaP countries showcase *diverse political alignments* and levels of commitment to EU integration, which affects their readiness and willingness to adopt EU norms and practices. For instance, one group of partnership (Georgia, Moldova, and Ukraine) has shown proactive attitude to integrate with EU frameworks, by participating in EU-led initiatives and reforming national policies to align with EU standards. Conversely, countries like Belarus and Azerbaijan have maintained a more cautious stance towards EU integration, often influenced by domestic and (geo)political factors. Therefore, factors of political instability, intertwined with regional challenges, should be considered while assessing the specificities. They necessitate adaptable and resilient policy frameworks, which might mean designing more flexible policy instruments that can withstand political fluctuations in commitment to EU directives.

From an *economic development* perspective, EaP countries have inter-regional disparities, high unemployment rates, underdeveloped industrial and technological sectors. These economic constraints limit the financial resources available for environmental investments and prioritize immediate concerns over long-term sustainability

projects. For instance, in most countries energy dependency on outdated and more polluting technologies persists because of the high costs associated with transitioning to cleaner alternatives. Along with outdated technologies, the region still experiences the sustainable infrastructure limitation, such as waste management systems, distribution networks, and poorly skilled workforce - all of which constrain adoption of greener technologies. Initiatives for technological transfer and adaptation could be a template for EaP countries, however, one must consider local technological readiness and infrastructure capabilities. Capacity-building initiatives and technology transfer agreements should be important in equipping EaP countries with the necessary tools and knowledge to accelerate use of these technologies.

Moreover, *lack of institutional capacity* and absence of designated or specialized institutions for Climate change and GT processes, as outlined in national reports, is another challenging aspect. There is often a lack of comprehensive and enforceable environmental legislation. Existing laws might not align with international standards or may be poorly implemented due to weak regulatory frameworks.

Cultural and social barriers also impede progress. The diverse social norms and values across EaP countries can influence the acceptance and success of GT policies. There's also a gap in environmental awareness on a societal level that influences the effectiveness of implemented policies. Those barriers, when merged with resistance to change and a lack of stakeholder's engagement, further impedes the GT process.

It's important to account for these challenges, consider WB experience, and tailor the framework under which it will be possible to formulate and adapt relevant practices. Like the EaP, the WB has also experienced political and economic instability, which have similarly impacted the GT path. Both regions share the need to balance immediate economic pressures with long-term sustainable development demands. However, unique difficulties also distinguish the EaP's experience. Nevertheless, unlike the WB, which benefits from a relatively cohesive policy execution, the EaP experiences a lack of regional unity, partly due to varying degrees of integration with the EU.

5.3.2 Framework applicability to EaP

In the EaP context, the GT Framework's applicability must be adjusted to the unique regional specificities of its member states. Diverse political climates, economic conditions, and cultural features, present both challenges and opportunities for these countries. The GT Framework, therefore, needs to be flexible and adaptable to accommodate the varying degrees of EU integration and the geopolitical sensitivities within the region.

The most adjustments in the roadmap scheme are expected in a planning phase. From the beginning of the transition, the framework should incorporate mechanisms that allow for varied levels of engagement and commitment. It should have a *flexible* nature that will reflect the distinct political and economic aspirations of the

EaP countries. For example, countries like Belarus, Armenia and Azerbaijan may require a more tailored approach that considers their stance towards EU integration and emphasizes regional benefits and independence.

Furthermore, due to reasons of current political alignment and integration goals, as well as fragmented governance and coordination, it's essential to have a body or *group designated for regional cooperation*. The structure can benefit from WB experience of Regional Framework for Cooperation, which in case of EaP context, will serve for dialogue and consensus-building among EaP countries; It will be responsible for an exchanging of best practices, addressing common challenges, and fostering a sense of mutual trust. Ultimately, with its approaches (monitoring, partnerships, coordination, communication) will strive to achieve socio-economic development and regional coordination across diverse sectors

After establishing a group for a broader coordination, the focus shifts on the national levels, where *setting up working structures on GT* topic becomes essential. According to challenges elaborated in Chapter 3, groups or special institutions working on climate change are practically missing in most of the EaP countries. For that reason, essential in the planning phase is the evaluating capacities and resources of institutions and accordingly defining or establishing designated working groups for GT.

Moreover, in parallel to the baseline scenario definition, EaP countries could benefit from gathering information and data from sectoral initiatives or projects. For example, EU funded initiatives such as EU4Environment, EU4Energy and EU4Climate, could provide sector-specific data, which can be coordinated and consolidated in *unified databases*. This approach would streamline data collection, improve data quality and consistency, and facilitate more accurate analysis. The consolidated data could then be used to identify trends, evaluate existing policies, and develop new strategies tailored to the region's needs. Additionally, this database would support further monitoring and evaluation. Managing information from scattered initiatives, EaP can build a data-driven foundation for their GT process.

The last step in the preparation phase is *identification of policy gaps*, where EaP can assess and compare current policies and initiatives with EU standards. This involves a comparison of regulatory frameworks, enforcement mechanisms, and sector-specific policies in areas of energy, transportation, waste management, and so on. Identifying these gaps can highlight areas needing improvement and help understand barriers to aligning with EU directives. In summary, identifying policy gaps bridges the preparation and planning phases, lays the groundwork for developing targeted strategies to align EaP policies with EU standards and better formulate GT goals.

Moving to the planning phase, here a tailored step for the EaP is the *policy alignment and cross-sectoral integration* in order to tackle multi-dimensional challenges. As outlined in EaP National Reports, policy fragmentation arises as one of the biggest challenges in the governance field, where sectoral policies or initiatives stand as siloes. Therefore, it's essential to integrate GT policies with national, regional and economic

development plans for avoiding duplication. This involves a review and alignment of existing policies to identify overlaps, gaps, and potential areas for collaboration.

Transitioning to the implementation phase, here important consideration for EaP context is the establishing *partnerships and twinning programs* with local and international organizations for receiving technical and capacity support. This will ensure that those countries have the necessary tools and resources to successfully implement their initiatives.

Moreover, as WB lessons have shown, *financial investment plans* such as PPPs and innovative funding mechanisms (green bonds and environmental taxes), could be beneficial for EaP. Here, GAWB governance model can introduce to EaP a structure similar to the Donor Coordination Platform. It could connect funding sources with strategic needs and ensure that financial resources are allocated efficiently and transparently, which could be an essential in EaP context due to increased corruption levels. This platform can serve as a hub for the collection of funds from international donors - by this means prevent the duplication across similar projects and ensuring that each initiative receives the necessary financial support.

After the financial investments are gathered and redirected, it's essential to *build local capacities* and foster technological transfer that way. The framework should address the disparities in industrial and infrastructural development across the region. Initiatives should focus on building local capacities and fostering technological transfers that align with the specific needs and capabilities of each country. This approach will reduce the economic shock to vulnerable populations.

Referring to the cultural acceptance, due to traumatic experience of past transitions and cultural barriers, it's essential that GT framework should promote policies that are developed through inclusive and participatory processes. The framework should promote co-ownership initiative for gaining public trust and *fostering a collective sense of ownership* over environmental initiatives. Parallel to that, educational programs and awareness campaigns need to communicate the benefits of the GT in a way that is accessible and engaging for all stakeholders, particularly in areas with low environmental awareness.

Lastly, implementation should be supported by a reinforced monitoring and evaluation system that will allow for continuous adjustment based on real-time feedback and emerging challenges. This approach will enable the EaP to have a timely action in their regional dynamics and achieve tangible progress in their transition.

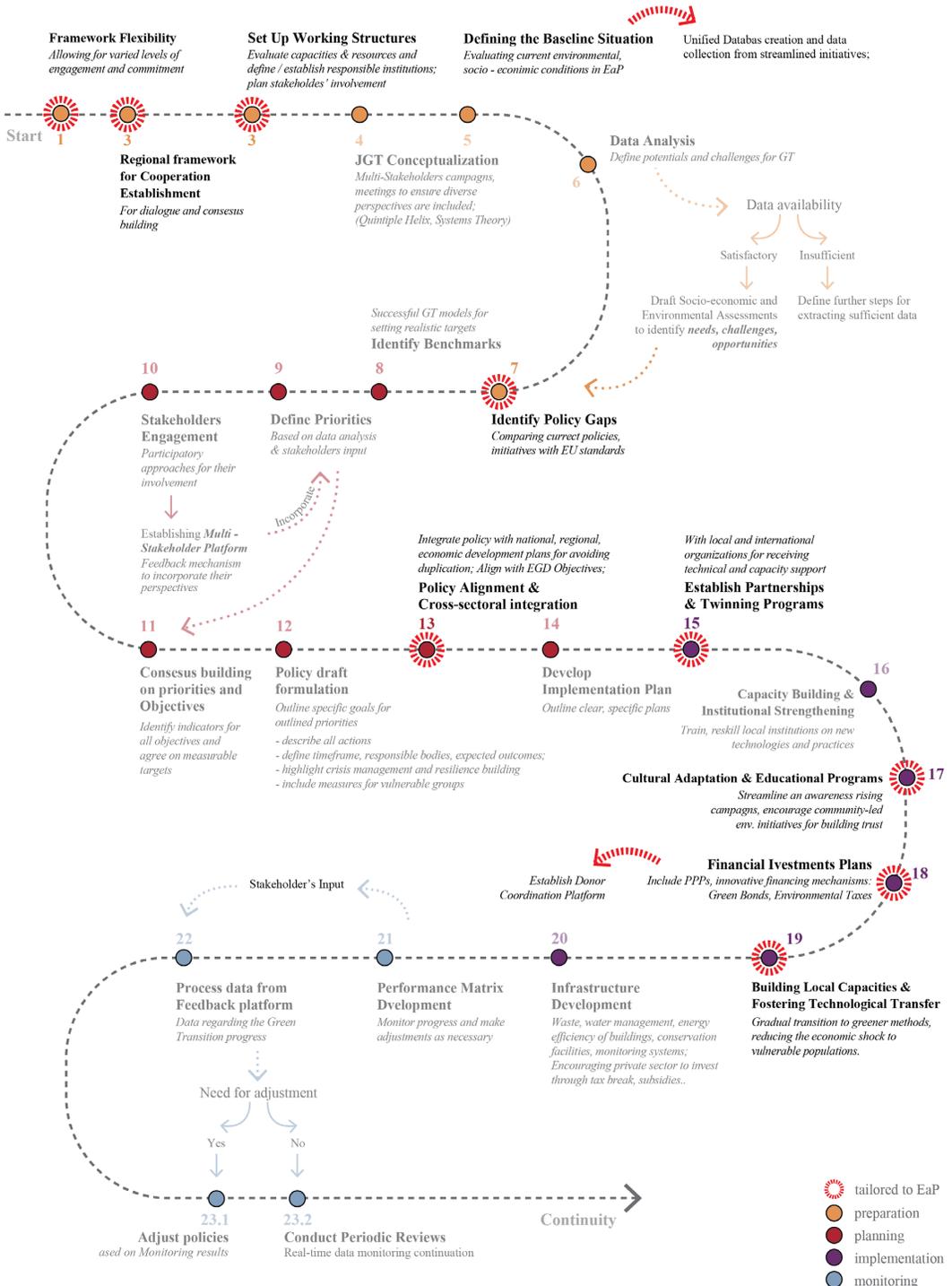


Figure 19: GT Roadmap for EaP

Limitations

SECTION 5.4

Before concluding with future research perspectives, it is important to discuss the limitations that may affect findings of the study. Firstly, it is important to mention the theoretical limitation of GT, which may not fully capture the complexities and interdisciplinary nature of the topic. Although the EGD covers various areas (climate action, env. protection, energy, transportation, industry, agriculture), the GT in transitional countries transcends traditional pillars of sustainability and encompasses broader political and economic factors. It is important to note that the GT path is complex, non-linear, and highly dependent on broader political decisions, which are not fully described in the research.

The lesson's primary reliance on four questionnaires and one detailed qualitative interview restricted the breadth of perspectives. Participants included stakeholders from research institutions like Co-Plan and NordRegio, along with independent experts. However, due to time constraints and the relatively new topic, was not possible to reach the target actors, including public institutions, ministries, and local stakeholders. This limitation may have led to an incomplete understanding of challenges and opportunities within the WB. Moreover, interviews were conducted solely for the WB context, while conclusions for the EaP were primarily taken from secondary data analysis, policy documents and reports. Policy documents and reports often do not fully capture the dynamic processes within EaP countries as they frequently lack inputs from local communities.

Furthermore, the thesis methodology was mainly of a qualitative. Although it provided insights from different angles, the research still lacked quantitative approaches. The sample size, while sufficient for qualitative analysis, may not be large or diverse enough to generalize findings over the EaP region. Additionally, the researcher's subjective interpretations might have influenced the findings.

The geographical scope of the EaP, both Eastern Europe and the South Caucasus, had data-related challenges. Compared to the EU, they lack readily available, up-to-date, and consistent data, which complicates cross-country comparisons across the same thematic fields. Data scarcity affected the ability to fully capture the environmental, economic, and social nuances across the EaP and limited the applicability of the study's recommendations.

Additionally, the differences in political orientation among EaP countries further complicated the picture. Firstly, this made it difficult to generalize findings on the partnership, as it's possible for the WB context due to their coherent political affiliation. Secondly, this dynamically changing context brought a temporal limitation. For example, Georgia's transition to a candidate status during the study could not be fully explored due to time constraints. The evolving nature of these contexts means the findings represent a snapshot in time and may not fully capture the future state. Consequently, recommendations must be viewed within the temporal context of the study and acknowledge that ongoing developments could influence their relevance. Furthermore, certain temporal challenges were encountered in WB as well. Some initiatives of GAWB had not yet commenced, while others that had been launched were difficult to fundamentally evaluate due to their short-term ongoing status.

Last but not least, attention should be paid to the ongoing conflict in Ukraine, which introduced certain unpredictability and challenged the formulation of recommendations within the partnership.

For these reasons, future research should expand stakeholder engagement and include a wider group of participants from different sectors. Incorporate data collections that links the qualitative and quantitative approaches, and conduct longitudinal studies that will help to capture the evolving contexts affecting the transitions.

Future Research Perspectives

SECTION 5.5

The multifaceted processes of GT, especially in transitional countries require continuous research to confront emerging challenges and take advantage of upcoming opportunities. The future research should be about to make the variety of the interviewees wider, for example, include more representatives from public institutions, ministries, local governments, and communities. The future steps should also take into account the interview inputs from the EaP to perform a better analysis of emerging challenges, societal barriers and capacities.

The temporal dynamics of the EaP region, for example, the changing political and

economic contexts, necessitate research methodologies that are capable of reflecting these changes in time. The longitudinal studies would give the understanding about the long-term effects of the GT policies and thus, would enable to adjust the strategies as per the changes.

The policy fragmentation was emphasized as an important obstacle in the EaP. Upcoming studies should investigate the strategies of policy integration and cross-sectoral coordination. This involves the analysis of the different governance models that facilitate the synergetic policy-making across the various sectors and, at the same time, it ensures that the objectives are aligned with the national, regional and economic development plans. Nevertheless, the future research should study the governance systems and cultures of each EaP member state.

Besides, it's possible to focus deeper into the mechanisms of regional cooperation that can lead the GT process. Investigating successful models of regional collaboration, for example the Regional Cooperation Council in the WB. Research should investigate how similar frameworks can be adapted to the specific contexts of the EaP countries to build mutual trust and to coordinate strategies. Nevertheless, this part also necessitates detailed analysis of governance and institutional cultures of member states.

Societal awareness and cultural factors are one of the main aspects of the GT, as they determine the acceptance and success of measures. Future research could focus on the development of culturally sensitive public awareness campaigns and community-based initiatives that are aligned with local values and traditions. The research in this field can help to rebuild the public trust and the collective sense of ownership in EaP. For that, field research is needed to realistically evaluate public opinions and build future steps on it.

Last but not least, the future studies should focus on developing data collection frameworks to improve data accuracy and availability. It's possible to establish centralized databases that consolidate information from sectoral initiatives, such as EU4Environment, EU4Energy, and EU4Climate.

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Interview Annex

Researcher: Ketevan Katcharava, Master's Degree Student at Politecnico di Torino

Introduction and Purpose of the research: The thesis explores the Green Transition within the Eastern Partnership (EaP) and how it aligns with the EU Green Deal. To analyze challenges and pinpoint solutions for the EaP, I've chosen to focus on the Western Balkans (WB) case study, since they are one step ahead with the approved Green Agenda for the Western Balkans (GAWB). The purpose of this interview is to become familiar with the regional challenges associated with the green transition and the implementation of the GAWB, which lessons I can later apply to the EaP's context.

I believe the context-specific knowledge you hold will help me to better understand the regional context, challenges and progress associated with the green transition and the implementation of the Agenda. Your contribution to this research is appreciated, as it could pave the way for formulating context-sensitive strategies for the EaP.

How you'll contribute to the study: You are invited to participate in an interview of 15 mins, where you will be asked about various aspects of the green transition in the Western Balkans, including: theoretical perspectives, socio-economic impacts, stakeholder and community engagement, financing and support strategies. Questions will cover the topic of conflict-triggered crises and their impact on long-term strategies, implementation challenges and the future outlook.

Informed consent and confidentiality:

Participation in this study is voluntary, responses will remain confidential and will only be used for the purposes of this research. Data will be reported in aggregated form, that will ensure that no identifying information is disclosed.

** Indicates required question*

1. Name and Occupation*

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2. Email *

.....

THEORETICAL PERSPECTIVES & PERCEPTIONS ON A (JUST) GREEN TRANSITION

3. What theories do you find the most useful in designing effective governance for green transition and how can they be applied to ensure inclusive decision-making processes in Western Balkans? *

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4. How receptive the stakeholders (government, private sector, communities) are to integrating green transition principles in their policies/projects? *



Unacceptable

Highly Acceptable

Mark only one oval.

5. Could you discuss specific policy frameworks or models that have been successful in ensuring a just transition in the WB, and what makes them effective? *

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SOCIO-ECONOMIC IMPACTS OF GREEN TRANSITION

6. Assess the workforce and community impact of transitioning to green energy and industries. *



Negligible

Transformative

Mark only one oval.

7. What measures are in place to support vulnerable groups and mitigate negative socio-economic impacts? *

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STAKEHOLDERS & COMMUNITY ENGAGEMENT

8. Evaluate stakeholder involvement in Green Transition measures *



Minimal

Strong

Mark only one oval.

9. How is it possible to improve regional stakeholders' engagement with Green Agenda initiatives?

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FINANCING & SUPPORT

10. What are the key strategies for securing funding & investments needed to support the green transition in the WB?

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CONFLICT IMPACT ON GREEN TRANSITION

The intersection of historical conflicts and political tensions in EaP countries and the WB is a common challenge (affecting stability, policy implementation, energy security all important for a successful green transition). I aim to explore how these challenges are addressed within the green transition framework and identify measures to mitigate their impacts.

11. Can you share any lessons learned from navigating green transition in conflict-affected scenarios?

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12. How have recent conflicts in Ukraine affected the green transition in WB? Are there specific areas (e.g., energy, agriculture, infrastructure) that have been more impacted? *

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13. Have conflict scenarios being factored into the long-term planning and vision for green transition? *

- Strongly disagree*
 - Disagree*
 - Neutral*
 - Agree*
 - Strongly agree*
- Mark only one oval.*

14. Could you please provide further details - what strategies being developed to address potential crises and how they are incorporated into the planning processes?

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IMPLEMENTATION CHALLENGES & FUTURE OUTLOOK

15. What are the main challenges faced in the implementation of the Green Agenda for the Western Balkans (GAWB)? *

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16. How have these challenges been addressed or could be addressed in the future. What policy improvements would you suggest. *

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17. Are there any technologies or innovative practices that have made an impact on green transition in WB? *

Yes No Maybe

Mark only one oval.

18. Please, elaborate the latter - which innovations do you see important for advancing a green transition in the region?

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SHARING LESSONS AND POSSIBILITIES FOR CROSS-BORDER COLLABORATION

19. Reflecting on the Western Balkans' experience, what lessons could be valuable for Eastern Partnership (EaP) as they have just started their own green transition path? *

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20. Do you see the possibility of cross-regional collaboration between the WB and EaP in green transition?*

Yes No Maybe

Mark only one oval.

21. would you be open to an oral interview or answering a few follow-up questions at your convenience?

Yes No

Mark only one oval.

22. Please, list up to 3 contacts (with emails if possible) that you think may provide useful responses to my questions

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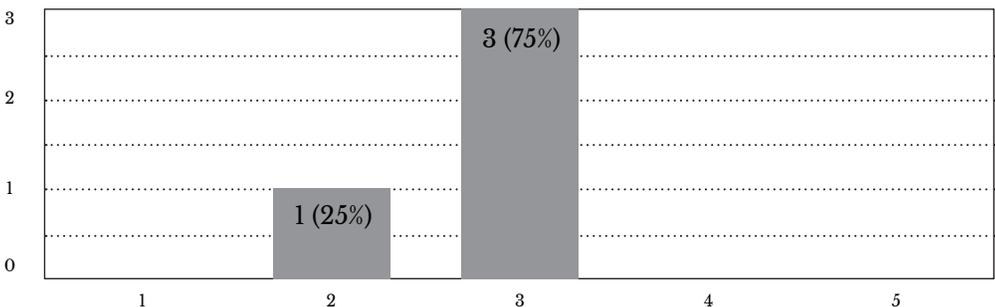
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Findings from Interviews

3. What theories do you find the most useful in designing effective governance for GT and how can they be applied to ensure inclusive decision - making processes in WB? *

Several theories were highlighted for designing governance for GT; The smart specialization and place-based innovation approaches emphasize using regional strengths to develop tailored strategies. By involving local stakeholders, the approach ensures that GT efforts are impactful for the specific needs of the region. Additionally, the quintuple helix model advocates for co-design processes, which views environment as one of the stakeholders and integrates its considerations from the initial phase. Environmental justice theory underlines the importance of addressing inequalities in how environmental benefits are distributed. This approach is particularly impactful for marginalized communities, them to be considered into policies and to not exacerbate existing injustices. Lastly, systems theory provides a framework for understanding governance as an interplay of various interconnected components, that address multiple dimensions of environment, society, economy, and politics.

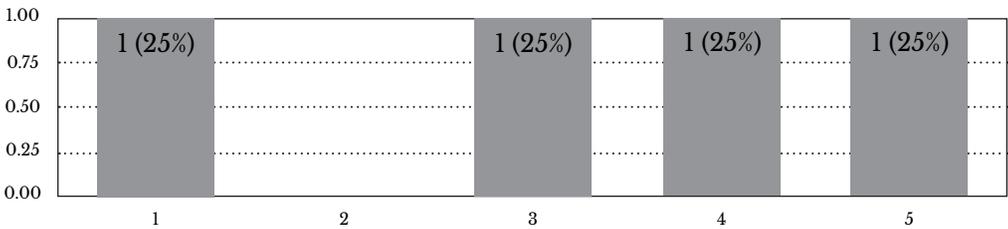
4. How receptive the stakeholders (government, private sector, communities) are to integrating green transition principles in their policies/projects? *



5. Could you discuss specific policy frameworks or models that have been successful in ensuring a just transition in the WB, and what makes them effective? *

The formulation of policy frameworks for GT is still in the nascent stages, but certain models and strategies have shown potential. Among these, biodiversity protection is as a successful pillar, as the clarity and precision of target indicators in this area have enabled responsible bodies for an effective implementation. Unlike other sectors that may require behavioral changes or upskilling, biodiversity policies are often preventive or restrictive and allow for straightforward compliance. Furthermore, regional initiatives such as the RCC have been important. It has been pivotal in drafting the action plan of the GAWB and its continuous monitoring on the progress maintains momentum in the GT process.

6. Assess the workforce and community impact of transitioning to green energy and industries. *

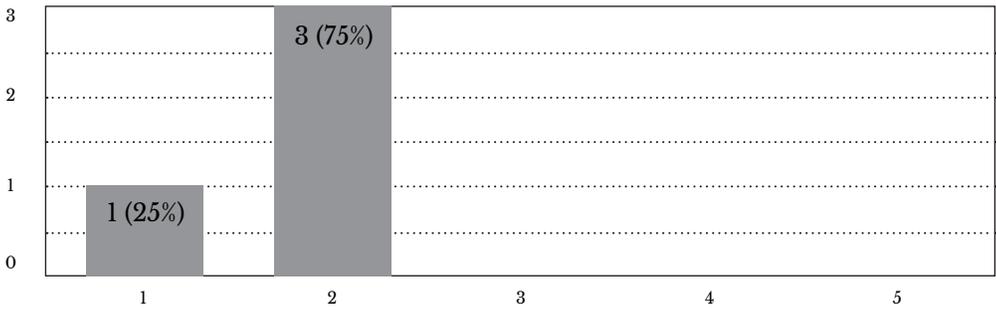


7. What measures are in place to support vulnerable groups and mitigate negative socio-economic impacts? *

In addressing the socio-economic impacts, strategic frameworks usually include sections dedicated to environmental and social impacts, although often lacking a detailed cost-benefit analysis. Direct measures for energy transitions are sparse, but general social safety net mechanisms exist that could be adapted to better support vulnerable groups.

Support for vulnerable groupd also comes from donor-funded projects by organizations such as the EU, UN, GIZ, SIDA, ADA, and SDC, which focus on green business support, skills training, and mentorship. For instance, in Albania, the employment and skills strategy includes provisions to aid those most affected by the transition, and indicates a proactive approach to mitigate job losses in greener economies.

8. Evaluate stakeholder involvement in Green Transition measures *



9. How is it possible to improve regional stakeholders' engagement with Green Agenda initiatives?

Improving regional stakeholders' engagement with Green Agenda initiatives can be improved by shifting from merely sharing information to fostering genuine participation and co-design of strategies. This includes creating co-ownership of decisions and emphasizing education about green initiatives. Although engaging stakeholders at a macro-regional level presents challenges due to the need to balance international and local interests, effective strategies can include: running awareness campaigns to educate about the importance of green initiatives, involving stakeholders in participatory decision-making processes, providing capacity-building support to empower effective participation, fostering multi-stakeholder partnerships, establishing clear and transparent communication channels and feedback mechanisms, implementing monitoring and evaluation processes to assess the effectiveness of initiatives and gather feedback for continuous improvement.

10. What are the key strategies for securing funding & investments needed to support the green transition in the WB?

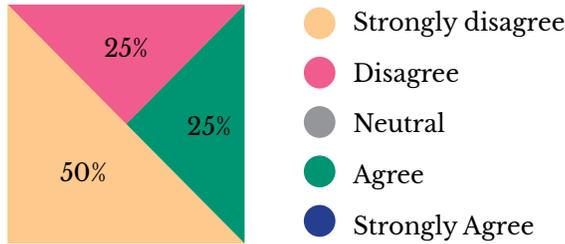
Securing funding for the GT in the WB is complex due to the outdated and coal-dependent energy systems. Key strategies include leveraging EU project funds, engaging in Public-Private Partnerships, and using domestic and private sector funding, along with loans from entities like the EBRD and EIB. Advocacy is also important for the EU to include the WB in the JT fund scheme prior to EU accession.

12. How have recent conflicts in Ukraine affected the green transition in WB? Are there specific areas (e.g., energy, agriculture, infrastructure) that have been more impacted? *

The recent conflicts in Ukraine have impacted the GT processes, particularly in the

energy sector. The region has faced increased energy and fuel prices as a result of the energy crisis in EU, which is linked to high import dependency on resources like gas and crude oil.

13. Have conflict scenarios being factored into the long-term planning and vision for green transition? *



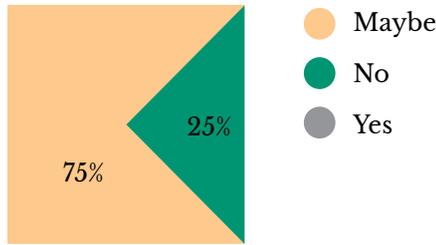
15. What are the main challenges faced in the implementation of the Green Agenda for the Western Balkans (GAWB)? *

Firstly, there is a need for a clearer understanding of what the Green Deal entails across different stakeholders and sectors. Legislation in all WB economies is yet to be fully harmonized with the EU acquis related to environmental standards, and this misalignment is compounded by issues such as a lack of data and insufficient skills. Additionally, administrative capacities are often inadequate for managing the scale of change required. Challenges also persist in generating private investments of the necessary magnitude, accessing non-loan funding, and addressing the macro-regional versus local specificities. Public acceptance and understanding of the Green Agenda, coupled with prevailing skepticism, further complicate the implementation process. Moreover, implementation challenges are attributed to the insufficient infrastructure development and cooperation between the WB and the EU.

16. How have these challenges been addressed or could be addressed in the future. What policy improvements would you suggest. *

Establishing harmonized data systems for GT assessment and developing curricula tailored to green policies are important steps. These recommendations should be complemented by policy reforms that integrate sustainable practices into economic models and restructure financial and legislative frameworks to support the transition process.

17. Are there any technologies or innovative practices that have made an impact on green transition in WB? *



19. Reflecting on the Western Balkans' experience, what lessons could be valuable for Eastern Partnership (EaP) as they have just started their own green transition path? *

Based on WB's initial path, lessons for the EaP include the importance of establishing realistic monitoring frameworks and improving climate and energy literacy to ensure the support and civil understanding. Prioritizing the upskilling and reskilling of workers is crucial for adapting to new technologies and sectors. Developing institutional capacities is also key to managing these processes. Moreover, the WB experience underscores the need for early and inclusive planning to avoid the pitfalls of top-down policy approaches, which can lead to discontent among stakeholders.

20. Do you see the possibility of cross-regional collaboration between the WB and EaP in green transition?*





MASTER'S DEGREE PROGRAMME IN:
TERRITORIAL, URBAN, ENVIRONMENTAL AND LANDSCAPE PLANNING

2023-2024

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