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Transformation of Global Ecopolitical Terminology and Prospects for Its Integration into National Policy: The Case of Georgia

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Abstract

In recent years, environmental governance and political geography have undergone significant conceptual transformations at global, academic, and policy levels. Current environmental discourse increasingly emphasises integrative approaches such as Nature-Positive Policies (NP), Environmental Justice (EJ), and Nature-Based Solutions (NBS). Although these concepts emerged within distinct theoretical and institutional contexts, they are increasingly interconnected within international environmental governance and sustainability planning. Collectively, they reflect a transition from reactive environmental management toward proactive strategies focused on ecosystem restoration, climate resilience, participatory governance, and socially equitable development. This paper examines the evolution of these emerging ecopolitical concepts, their theoretical and practical significance, and the prospects for their incorporation into Georgia's environmental governance framework. The study employs a qualitative, conceptual, and comparative approach, drawing on academic literature, international environmental frameworks, and selected national policy documents. Particular attention is given to the adaptation and localisation of global environmental paradigms within the Georgian context. The research demonstrates that integrating global ecopolitical terminology into national policy is not merely a linguistic or administrative process, but also requires institutional adaptation, improved spatial planning mechanisms, stronger participatory governance, and the incorporation of social justice principles into environmental decision-making. These issues are particularly relevant for Georgia in relation to geopark development, biodiversity conservation, climate adaptation, and sustainable regional planning. The paper argues that integrating NP, EJ, and NBS approaches can strengthen resilient and inclusive environmental governance in Georgia while improving alignment with contemporary international environmental strategies. By analysing the interpretation and localisation of global ecopolitical concepts, the study contributes to broader discussions concerning the relationship between international environmental discourse and national policy transformation.

Keywords: Nature-positive policy; Environmental justice; Nature-based solutions (NBS); Ecopolitical terminology; Ecological governance

Introduction

Since the beginning of the twenty-first century, global environmental policy shifted from traditional, reactive governance focused on pollution mitigation toward proactive approaches emphasising ecosystem restoration, climate resilience, and socio-environmental sustainability. Among these emerging paradigms, Nature-Positive (NP) policies actively promote the restoration and regeneration of degraded ecosystems rather than merely minimising ecological losses. Concurrently, Environmental Justice (EJ) ensures the equitable distribution of environmental benefits and public participation in decision-making (Schlosberg, 2007). Complementing these frameworks, Nature-Based Solutions

(NBS) strategically leverage natural ecosystem processes to address interconnected climate and societal challenges.

The institutionalisation of NP, EJ, and NBS reflects a growing consensus that modern ecological governance extends beyond purely technical or administrative mandates. Instead, it requires interdisciplinary strategies capable of integrating ecological integrity with social equity and robust spatial planning. This conceptual evolution carries profound implications for transitional economies such as Georgia, where high ecological vulnerability, regional development demands, and local community needs are deeply intertwined.

Adapting global environmental concepts to the Georgian context specifically across its diverse mountain ecosystems, protected areas, and climate-sensitive transboundary zones like the Alazani Valley cannot be treated as a tokenistic administrative exercise. Rather, it demands the systematic harmonisation of national policy mechanisms, institutional capacity, and meaningful grassroots public participation.

This study examines the conceptual evolution of NP, EJ, and NBS, evaluating both the opportunities and barriers for their structural incorporation into Georgia's environmental policy framework. Using a qualitative, conceptual, and comparative approach, the research evaluates international frameworks against Georgia's domestic environmental strategies.

Building upon recent insights regarding the convergence of ecological governance, spatial strategy, and protected areas policy in Georgia (Chichinadze & Tsiklauri, 2025), this paper explores how these global approaches can be practically localised. Ultimately, this study demonstrates that incorporating these interconnected frameworks can transition Georgia toward a more resilient, inclusive, and internationally aligned environmental governance model, effectively bridging the gap between global ecopolitical discourse and national policy execution.

Literature Review and Conceptual Framework

Nature-Positive Policy (NP)

Nature-Positive Policy (NP) has become one of the leading approaches in contemporary environmental governance. It represents a significant shift from reactive environmental strategies focused primarily on damage limitation toward proactive approaches aimed at restoring, regenerating, and enhancing natural systems. Since 2020, NP has gained increasing international attention through initiatives such as the UN Convention on Biological Diversity (CBD) and the European Union Biodiversity Strategy for 2030 (Convention on Biological Diversity, 2023). It is now widely recognised as a central framework for addressing biodiversity loss and promoting long-term socio-ecological sustainability.

At its core, NP is based on three main principles:

* Reducing pressures on ecosystems and preventing further environmental degradation;
* Restoring, rehabilitating, and reconnecting damaged ecological structures and functions;
* Promoting sustainable coexistence between human activities and natural systems through integrated governance approaches.

Numerous scholars emphasise that nature-positive approaches represent more than an environmental objective; they reflect a broader normative transformation in global ecopolitical thinking. Rather than viewing conservation solely as protection, these approaches emphasise ecological restoration and regeneration, aiming to achieve net positive environmental outcomes rather than simply minimising losses. This perspective requires systemic and landscape-level approaches that integrate biodiversity considerations into sectors such as agriculture, energy, infrastructure, and regional development. Consequently, NP approaches closely align with broader sustainability agendas, including the Sustainable Development Goals (SDGs) and climate adaptation strategies.

Within the European Union, nature-positive approaches have become important drivers of environmental policy innovation. The experiences of Germany, the Netherlands, and Scandinavian countries demonstrate how governments integrate nature-positive principles into biodiversity offset mechanisms, ecological compensation systems, green infrastructure planning, and nature-inclusive development strategies **(**European Commission, 2019**)**. These examples illustrate how ecological restoration objectives can be incorporated into legal and administrative systems, ensuring that development initiatives contribute to long-term environmental sustainability.

At the global level, nature-positive policies increasingly connect biodiversity conservation, climate governance, and environmental justice. International organisations emphasise that these approaches

should not only restore ecosystems but also generate social benefits, ensure equitable access to environmental resources, and strengthen participatory governance mechanisms. In this regard, NP approaches align closely with rights-based environmental governance models by addressing the disproportionate environmental burdens faced by vulnerable communities while supporting ecological and economic resilience.

Despite their transformative potential, the literature also identifies several challenges associated with NP implementation. The broad scope of nature-positive policies may create conceptual ambiguity, allowing governments or private actors to adopt nature-positive language without producing meaningful ecological outcomes. Critics further argue that market-based mechanisms, including biodiversity offsets, may unintentionally justify environmental degradation if they are not accompanied by clear ecological standards and transparent monitoring systems.

The implementation of nature-positive policies is particularly challenging in countries with limited institutional capacity. Studies conducted in Southern and Eastern Europe highlight barriers such as insufficient ecological data, weak intersectoral coordination, limited financial resources, and low levels of public participation. These structural constraints complicate the embedding of NP principles into land-use planning, agricultural governance, and spatial development policies. Effective implementation, therefore, requires reliable biodiversity monitoring systems, long-term financial support, participatory governance mechanisms, and institutional reforms.

In summary, nature-positive policies represent both far-reaching opportunities and complex governance challenges. By combining ecological restoration, social equity, and cross-sectoral coordination, NP approaches create significant opportunities for sustainable development while simultaneously revealing the institutional, financial, and political barriers that states must overcome for effective implementation.

Environmental Justice (EJ)

Environmental Justice (EJ) is one of the cornerstone concepts in current environmental governance. At its core, EJ is based on the principle that all individuals, regardless of race, ethnicity, income, or place of residence, should have fair access to environmental benefits and an equal opportunity to participate in decision-making processes that affect their environment (Schlosberg, 2007). The concept gained prominence in the United States in the late 1980s, when social movements drew attention to the disproportionate exposure of marginalised communities to industrial pollution, toxic waste, and other environmental hazards. These movements laid the foundation for EJ as a framework that integrates environmental protection with social equity and human rights (Bullard, 1990).

EJ is commonly understood through three interrelated dimensions:

* Distributional justice: Concerns the fair allocation of environmental benefits and burdens, ensuring that no social group bears a disproportionate share of environmental harm.

* Procedural justice: Emphasises inclusive and transparent decision-making processes, guaranteeing that all stakeholders have a meaningful voice in environmental governance, policy development, and impact assessment.

* Recognition justice focuses on acknowledging specific vulnerabilities, cultural identities, and historical disadvantages of different communities (Schlosberg, 2007; Pellow, 2018). It aims to address these challenges effectively.

Together, these dimensions form a comprehensive framework that links ecological protection with social equity and democratic governance.

Globally, EJ principles are increasingly integrated into environmental policy and governance structures. Institutions such as the United Nations Environment Programme (UNEP) and the European Union have incorporated EJ considerations into environmental initiatives, promoting public participation, accountability, and equitable distribution of environmental benefits. For instance, EU policy frameworks emphasise public engagement, consultation processes, and inclusive governance mechanisms that reflect both procedural and recognition dimensions of environmental justice (UNECE, 2014). When effectively implemented, EJ-oriented initiatives are associated with improved environmental outcomes, including better air and water quality, as well as strengthened community resilience through local empowerment and capacity-building. In this way, environmental justice contributes simultaneously to ecological sustainability and human development.

However, implementing EJ principles is challenging, especially in countries with centralised governance, limited public participation, or weak institutions. Research shows that procedural mechanisms may formally exist but often do not ensure meaningful community engagement. This

results in symbolic or superficial application of justice principles (Agyeman et al., 2016). Also, insufficient ecological and socio-economic data hinder accurate identification of vulnerable populations and assessment of equitable distribution of environmental risks and benefits. These limitations show that effective environmental justice needs not only normative commitment but also robust institutions, reliable data systems, legal frameworks, and public awareness.

Furthermore, scholars emphasise that EJ should not be treated as an isolated framework; rather, it must be integrated into broader environmental strategies, including climate adaptation, biodiversity conservation, and nature-based solutions. Without careful contextual adaptation, global EJ frameworks may unintentionally reproduce inequalities or fail to empower the very communities they aim to protect (Schlosberg, 2013). This highlights the importance of governance approaches that combine top-down policy design with bottom-up participatory processes.

In summary, Environmental Justice provides a powerful analytical lens for understanding the interconnections between ecological systems and social structures. By emphasising fair distribution, inclusive participation, and recognition of vulnerable groups, EJ offers a multidimensional foundation for environmental governance. Although significant challenges remain, particularly in contexts with limited institutional capacity, carefully designed and context-sensitive implementation of EJ principles can enhance environmental outcomes, strengthen community resilience, and support more equitable and sustainable governance at local, national, and global scales.

Nature-Based Solutions (NBS)

Nature-Based Solutions (NBS) have become a central approach in current environmental governance, emphasising the use of natural processes and ecosystem functions to address societal and environmental challenges. These include climate change adaptation, disaster risk reduction, biodiversity conservation, and sustainable development (Cohen-Shacham et al., 2016). Unlike traditional engineering-based approaches, NBS build upon the inherent capacities of ecosystems to generate multiple ecological, social, and economic benefits simultaneously. International organisations such as the European Union, the United Nations, and the International Union for Conservation of Nature (IUCN) increasingly support NBS as an important mechanism for achieving global sustainability goals, including the SDGs and the objectives of the Paris Climate Agreement (IUCN, 2020).

Several characteristics define NBS approaches:

* Solution-oriented: Designed to generate practical outcomes such as flood mitigation, soil stabilisation, carbon sequestration, ecosystem restoration, and urban environmental improvement.

* Context-specific: Must be adapted to local ecological, social, and cultural conditions.

* Multifunctional: Capable of simultaneously supporting biodiversity conservation, climate resilience, and social well-being (Eggermont et al., 2015).

These characteristics make NBS particularly relevant for integrated landscape management and for countries attempting to balance environmental protection with development priorities.

Nature-based solutions are increasingly implemented across different regions of the world. In Europe, initiatives such as wetland restoration in the Netherlands, urban green infrastructure projects in Germany, and forest restoration programs in Spain demonstrate how NBS can combine ecological restoration with economic and social benefits (Kabisch et al., 2017). At the international policy level, the IUCN categorises NBS into several broad areas, including ecosystem restoration, ecosystem-based management, and climate adaptation measures, which help guide both public and private environmental investments (IUCN, 2020). Research further demonstrates that carefully planned NBS initiatives can reduce climate vulnerability, strengthen ecosystem services, and improve social resilience (UNEP, 2021).

Despite these advantages, implementing NBS remains challenging. Effective implementation requires strong scientific expertise, reliable ecological and socio-economic data, coordinated multi-level governance, and sustainable financial mechanisms. Critics argue that some NBS initiatives are implemented superficially and function primarily as symbolic “green” interventions without generating measurable ecological and social benefits (Cohen-Shacham et al., 2016). Similarly, market-oriented mechanisms, such as ecosystem-based carbon offset projects, may prioritise economic interests over ecological integrity unless supported by transparent governance and effective monitoring systems.

Georgia has considerable potential for implementing NBS due to its ecological diversity, including mountain landscapes, river valleys, wetlands, and coastal ecosystems. Measures such as afforestation, wetland restoration, riverbank stabilisation, and urban green infrastructure development may help address climate risks, strengthen biodiversity conservation, and provide socio-economic benefits to

local communities. However, successful implementation depends on integrating NBS into national environmental policies, geopark management frameworks, spatial planning systems, and climate adaptation strategies. The effectiveness of NBS in Georgia is also closely connected to principles of environmental justice and nature-positive governance.

In conclusion, Nature-Based Solutions represent a transformative framework for sustainable environmental governance. By combining ecosystem restoration, climate adaptation, and socio-economic benefits, NBS offer multidimensional approaches that connect global sustainability objectives with local environmental realities. However, their long-term effectiveness depends on careful planning and implementation, inclusive governance, adequate financing, scientific monitoring, and strong institutional support to ensure both ecological integrity and social inclusion.

Methodology

This research applies an interdisciplinary, qualitative, conceptual, and comparative methodology to examine the transformation of emerging global ecopolitical terminology and evaluate the prospects for its structural embedding into national environmental governance in Georgia. The study specifically unpacks three interconnected, paradigm-shifting frameworks: Nature-Positive Policies (NP), Environmental Justice (EJ), and Nature-Based Solutions (NBS).

To ensure analytical rigour, the research design is structured into three consecutive operational phases:

* Phase 1: Conceptual Mapping and Discursive Evaluation. This stage involves a systematic review of international academic literature and institutional frameworks to trace the theoretical origins, normative shifts, and operational criteria of NP, EJ, and NBS. Material for this phase was sourced from peer-reviewed scholarly publications, as well as landmark strategy papers developed by the European Union (EU), the United Nations Environment Programme (UNEP), and the International Union for Conservation of Nature (IUCN).

* Phase 2: National Policy and Legal Contextualization. This stage critically reviews the current landscape of Georgia’s domestic environmental policies. Rather than assessing statistical compliance, this phase utilises qualitative content analysis to identify conceptual gaps, institutional readiness, and the degree to which global ecopolitical terms are currently codified or absent within national strategic planning.

* Phase 3: Case-Specific Synthesis and Localisation. The final phase explores the practical application of the integrated theoretical framework within specific geographical and socio-ecological contexts in Georgia, examining targeted initiatives such as geopark development, protected areas management, and transboundary climate adaptation.

Georgia serves as an ideal case study for this analysis due to its complex geopolitical position, high vulnerability to climate change, and ongoing environmental sector reforms driven by international obligations. Building on previous analyses regarding the intersections of protected areas policy, ecological governance, and spatial strategies within the country (Chichinadze & Tsiklauri, 2025), this study expands the analytical scope. It extends beyond a purely spatial-geopolitical perspective to evaluate how emerging global concepts can be operationally adapted to Georgia's localised geographical, administrative, and socio-cultural realities. Particular emphasis is placed on ecologically sensitive zones, including mountain ecosystems, protected areas, and key transboundary regions such as the Alazani Valley.

The primary qualitative data for the policy review comprises a selected corpus of national strategic documents, including Georgia's National Environmental Action Programme (NEAP) (Ministry of Environmental Protection and Agriculture of Georgia, 2018), the National Biodiversity Strategy and Action Plan (NBSAP) (Ministry of Environmental Protection and Agriculture of Georgia, 2014) , and emerging regional spatial and climate adaptation guidelines.

Discussions

The integration of global ecopolitical concepts, specifically Nature-Positive Policies (NP), Environmental Justice (EJ), and Nature-Based Solutions (NBS) into Georgia’s environmental governance is not merely an exercise in academic alignment but a strategic imperative for sustainable regional development. Evaluating these frameworks against Georgia’s current domestic policy instruments reveals critical implementation pathways, existing institutional gaps, and significant opportunities for localisation.

Aligning the National Biodiversity Strategy and Action Plan (NBSAP) with Nature-Positive Paradigms

Georgia, recognised as a global biodiversity hotspot, has historically anchored its ecological governance in traditional conservation models via the National Biodiversity Strategy and Action Plan (NBSAP). However, current national strategies largely adhere to a reactive, defensive posture focused primarily on the mitigation of ecological degradation and the strict protection of designated areas.

Integrating the Nature-Positive (NP) framework into the upcoming iterations of the NBSAP facilitates a paradigm shift from passive protection to active ecosystem restoration and regeneration. This shift is crucial for managing current initiatives like geopark development and protected areas network expansions. Embracing an NP framework requires that spatial development in sensitive zones- such as the semi-arid landscapes of Kakheti and the volcanic plateaus of Javakheti- does not simply aim for "zero net loss" of biodiversity but actively guarantees net-positive ecological outcomes through institutional mandates and harmonised land-use planning.

Codifying Nature-Based Solutions (NBS) in the National Environmental Action Programme (NEAP)

The National Environmental Action Programme (NEAP) serves as Georgia's primary vehicle for addressing climate change adaptation, disaster risk reduction, and land degradation. Traditionally, state responses to environmental hazards such as seasonal flooding in the Alazani Valley or landslides in mountainous regions have relied heavily on "grey infrastructure" (e.g., concrete river embankments and artificial retaining walls), which often incurs high capital costs and unintended ecological disruption.

Codifying Nature-Based Solutions (NBS) within the NEAP provides a more resilient, cost-effective, and multifunctional alternative. By leveraging natural ecosystem processes, national strategies can prioritise initiatives such as the restoration of riparian floodplains along the Alazani River, eco-engineering for slope stabilisation, and urban green infrastructure development. This structural shift ensures that infrastructural investments simultaneously support climate resilience, protect local biodiversity, and deliver critical socio-economic co-benefits to surrounding communities.

Strengthening Environmental Justice (EJ) through the Aarhus Convention Framework

As a signatory to the Aarhus Convention, Georgia possesses a foundational legal infrastructure for environmental democracy, which theoretically guarantees public access to information, justice, and participation in decision-making. In practice, however, procedural mechanisms often function as formalistic or administrative hurdles, failing to achieve meaningful stakeholder engagement.

Applying the multidimensional lens of Environmental Justice (EJ) can significantly bridge the gap between formal legal frameworks and local realities. For instance, when establishing new geoparks or implementing regional climate adaptation strategies, state institutions should move beyond formal compliance and actively incorporate:

* Procedural Justice: By establishing transparent, bottom-up consultative channels that give a decisive voice to local populations.

* Recognition Justice: By explicitly acknowledging and safeguarding the cultural identities, traditional land-use rights, and specific socio-economic vulnerabilities of local agrarian and mountain communities.

This dual focus guarantees that the benefits of green development are equitably distributed (Distributional Justice), thereby mitigating the risk of green gentrification or community displacement.

Conclusion

This study examined the development and significance of three major paradigms of current environmental governance: nature-positive policies (NP), environmental justice (EJ), and nature-based solutions (NBS) and discussed their potential embedding into Georgia’s national environmental policy. Each approach reflects a transition from traditional reactive environmental management toward proactive strategies that integrate ecological restoration, social equity, and sustainable development.

Nature-positive policies contribute not only to reducing environmental degradation but also to actively restoring ecosystems and promoting sustainable interactions between society and nature. Environmental justice emphasises the equitable distribution of environmental benefits and burdens, inclusive decision-making, and the recognition of vulnerable communities. Nature-based solutions provide practical mechanisms for implementing these principles by using ecosystem functions to address climate change, biodiversity loss, and socio-economic challenges simultaneously. Collectively, these paradigms

establish a multidimensional governance framework that connects environmental, social, and economic objectives.

In Georgia, the incorporation of NP, EJ, and NBS approaches has the potential to significantly improve the management of geoparks, protected areas, biodiversity conservation initiatives, and climate-sensitive regions such as Kakheti, Kvemo Kartli, and Javakheti. Achieving these objectives requires strengthening institutional capacity, improving ecological and socio-economic data collection, establishing participatory governance mechanisms, and ensuring long-term financial support. Equally important is the adaptation of international environmental approaches to Georgia's specific socio-cultural, geographical, and ecological conditions in order to produce meaningful environmental and social outcomes rather than symbolic policy implementation.

The study further demonstrates that the incorporation of emerging ecopolitical paradigms into Georgian environmental governance may strengthen ecosystem resilience, increase public participation, and improve alignment with international environmental standards and sustainability strategies. By translating global environmental concepts into local governance practices, Georgia has the opportunity to advance sustainable regional development while addressing climate risks, protecting biodiversity, and promoting social equity.

Ultimately, the successful implementation of these approaches depends on a holistic, interdisciplinary, and inclusive governance model that effectively connects international environmental concepts with local realities and ensures that environmental governance benefits both ecosystems and society.

Competing interests

The author declares that they have no competing interests.

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