

# Spatial Justice and Equitable Development in the Prespa Lake Borderland: A Transboundary Analysis

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**Abstract -** This paper examines spatial justice in cross-border areas, specifically focusing on regions outside of Europe. Spatial justice refers to fair access to resources, services, and opportunities for diverse communities. While much of the current literature centers on European contexts, this study aims to fill the gap in understanding spatial justice in non-European cross-border settings. The research focuses on the Prespa Lake borderland, a tri-national area involving Albania, Greece, and North Macedonia. The study emphasizes that governance fragmentation in these regions can worsen socio-economic inequalities and environmental issues. The Prespa basin is known for its rich biodiversity but faces significant challenges, including declining water levels and pollution, which disproportionately impact local communities.

The paper explores the theoretical foundations of spatial justice and assesses existing cooperation mechanisms within the Prespa context. Key findings indicate ongoing distributional, procedural, and recognition injustices, resulting in unequal access to resources, inadequate infrastructure, and the marginalization of minority communities.

To promote equitable and sustainable development, the study recommends strengthening transboundary governance frameworks, enhancing stakeholder participation, and establishing fair resource management protocols. By encouraging collaboration among local communities, governments, and NGOs, the report seeks to tackle the underlying causes of spatial injustice in the region. Ultimately, this analysis highlights the necessity of incorporating spatial justice principles into policy and practice to create a fairer and more sustainable future for the Prespa Lake borderland.

**Keywords** - spatial justice, cross-border areas, transboundary governance, socio-economic disparities, Prespa Lake, environmental sustainability

## Introduction

The pursuit of justice is increasingly recognized as having an inherent spatial dimension, a reality highlighted within cross-border regions. These territories, where distinct national sovereignties converge over shared landscapes, ecosystems, and socio-economic flows, present unique and complex challenges. Borderlands frequently experience peripherality within their respective national contexts, resulting in fragmented governance structures, significant socioeconomic disparities, and complex environmental management challenges. [1] Such complexities underscore the critical need for applying a spatial justice lens that intentionally focuses on the geographical distribution of resources and opportunities, the fairness of decision-making processes, and the recognition of diverse communities to understand and effectively address the inequalities prevalent in these territories. Ignoring the spatiality of justice in these contexts risks overlooking fundamental drivers of inequity and limits the potential for effective, collaborative solutions. [2]

## Introducing the Prespa Lake Region: A Unique Tripoint

Nestled high in the Balkans, the Prespa Lake basin represents a compelling case for examining spatial justice in a transboundary setting. This unique region straddles the borders of Albania, Greece, and North Macedonia, encompassing the ancient tectonic Great and Small Prespa Lakes. Situated at an elevation of approximately 853 meters, these are the highest tectonic lakes in the Balkans. The region is internationally recognized as a biodiversity hotspot, boasting Ramsar sites, national parks within each country (Prespa National Park in Greece, Prespa National Park in Albania, and parts of Galičica and Pelister National Parks in North Macedonia), and inclusion in the Ohrid-Prespa Transboundary Biosphere Reserve designated by UNESCO. This ecological wealth and a rich cultural heritage spanning millennia coexist alongside

significant challenges. The Prespa basin faces severe environmental pressures, including dramatic water level decline and pollution, complex transboundary governance involving EU member and candidate states, and persistent socio-economic disparities. [3] This confluence of factors makes Prespa an ideal laboratory for analyzing the dynamics of spatial justice and the potential for achieving more equitable and sustainable development across borders.

### Paper Aims and Structure

This paper aims to analyze spatial justice within the unique context of the Prespa Lake borderland. It investigates the theoretical underpinnings of spatial justice and applies these concepts to the specific challenges and opportunities present in the region. The analysis critically evaluates existing cross-border cooperation mechanisms and assesses the potential applicability of international best practices and tools for fostering more equitable outcomes. Ultimately, the report seeks to contribute to a deeper understanding of spatial justice in complex transboundary settings and offers evidence-based recommendations for promoting sustainable and just development in the Prespa region. The paper is structured as follows: Section II conceptualizes spatial justice, exploring its theoretical foundations and key dimensions relevant to planning. Section III examines the inherent challenges of cross-border regions, focusing on governance, socio-economic disparities, environmental management, and infrastructure. Section IV identifies and analyzes international tools, instruments, and governance models used to promote spatial justice in transboundary contexts. Section V presents a detailed case study of the Prespa Lake borderland, analyzing its specific context, spatial justice challenges, and existing cooperation frameworks. Section VI evaluates the applicability and potential

effectiveness of the international tools identified in Section IV within the Prespa context. Section VII synthesizes the findings, discussing the broader implications of the Prespa case for understanding spatial justice. Section VIII offers concrete recommendations for action, concludes the report, summarizes key findings, and emphasizes the path forward.

### Conceptualizing Spatial Justice in Planning

**Defining Spatial Justice: Theoretical Perspectives**  
 Spatial justice emerges from the fundamental recognition that social justice is inextricably linked to space and territory. It moves beyond viewing space as a mere backdrop for social processes; instead, it is understood as actively constituted by and constitutive of social relations—a concept often termed the socio-spatial dialectic. [4] In this view, space is not neutral; it embodies and reproduces power relations, inequalities, and opportunities. [5] Pioneering work by critical geographer Edward W. Soja significantly advanced the concept. Soja defined spatial justice primarily in distributional terms as "the fair and equitable distribution in space of socially valued resources and opportunities to use them." [2] However, he crucially emphasized that spatial (in)justice encompasses both the observable outcomes—the unjust geographies of advantage and disadvantage—and the underlying processes that produce these geographies. These processes can include deliberate or unintentional 'locational discrimination,' where specific populations are disadvantaged simply because of where they live, leading to enduring spatial structures of privilege. Complementing this perspective, Susan Fainstein, focusing on urban planning, developed the "Just City" concept. Fainstein argues for incorporating equity, democracy, and diversity as primary evaluative criteria in planning and policy-making. [6] Her work seeks pragmatic pathways for achieving greater



Fig 1/ : Landscape view of Pustec

source/ author Pustec (2023)

justice within existing political-economic systems, suggesting that meaningful reforms are possible at the local level despite structural constraints. She challenges planners to move beyond a narrow focus on economic growth and actively consider the distributional effects and democratic legitimacy of development projects. [6]

The concept of spatial justice is inherently interdisciplinary, drawing insights from geography, urban planning, sociology, political philosophy, and legal studies. While related to concepts like territorial justice (often focused on interregional equity) and environmental justice (focused on the distribution of environmental burdens and benefits), spatial justice offers a distinct critical spatial perspective. It provides a potentially broader framework for examining the geographical aspects of fairness across all societal domains, or at least sharpening the focus on how spatial arrangements contribute to or alleviate injustice. [2]

### Core Dimensions: Distributional Equity, Procedural Justice, and Recognition

Contemporary understandings of spatial justice typically integrate three core, interdependent dimensions, drawing parallels with frameworks developed in environmental justice:

Distributional Justice: This dimension addresses the fairness of the spatial allocation of society's benefits and burdens. It scrutinizes the geography of access to essential resources (like clean water, land, and energy), public goods and amenities (parks, cultural facilities), services (healthcare, education, transport), and opportunities (employment, economic development). Conversely, it also examines the spatial distribution of burdens, such as exposure to pollution, environmental hazards, lack of infrastructure, or limited access. A key premise here is that the 'normal' functioning of market

economies and urban systems often inherently generates spatial inequalities, concentrating advantages in some areas while disadvantaging others. [7] Achieving distributional justice involves measuring disparities and actively working towards a more equitable spatial pattern of resource and opportunity allocation based on need and fairness. [8]

Procedural Justice: This dimension focuses on the fairness and inclusivity of the processes through which decisions about space are made. [9] It examines the governance of the built environment, including planning, policy-making, design, and management. Key elements include transparency, accountability, and meaningful public participation, ensuring that all stakeholders—including public bodies, private actors, and diverse civil society groups—have a voice in shaping their environment. Deliberative processes, which encourage reasoned discussion and the integration of diverse perspectives (including expert knowledge and citizen input), are crucial for achieving legitimate and just outcomes. The underlying principle is that fair procedures will likely lead to fair spatial distributions. [5]

Recognition Justice: Also referred to as recognition justice, this dimension emphasizes the importance of acknowledging, respecting, and valuing the diverse identities, experiences, needs, and cultural expressions of all individuals and groups within a society, particularly those who have been historically marginalized or misrepresented. It involves ensuring visibility and voice for these groups in political, social, and cultural institutions; promoting diversity and inclusion in decision-making; and treating all individuals with dignity. [10] Recognition justice also entails acknowledging and addressing historical injustices and their ongoing spatial impacts. It highlights the cultural, social, and



Fig 2/ : Landscape view of Pustec

source/ author Pustec (2023)

psychological dimensions of justice, recognizing that misrecognition or lack of respect can be as damaging as material inequality and underpin both distributional and procedural injustices. [11]

### Implications for Equitable Access to Resources, Services, and Opportunities

These three dimensions of spatial justice are deeply interconnected and have profound implications for ensuring equitable access in urban and regional planning. Spatial patterns of unequal access—whether to good schools, reliable transport, affordable housing, clean environments, or economic opportunities—are rarely accidental. They often result from planning and governance processes that lack procedural fairness, failing to include or give adequate weight to the voices and needs of certain communities (procedural injustice). This, in turn, frequently stems from a failure to recognize the distinct circumstances, values, or rights of marginalized groups (recognition injustice). For instance, the siting of polluting industries or the lack of investment in public transport in low-income or minority neighborhoods (a distributional injustice) might be traced back to planning decisions made without meaningful consultation with residents (procedural injustice) and potentially influenced by a societal lack of recognition of their health concerns or mobility needs. [5] Similarly, inadequate provision of culturally appropriate services or the destruction of heritage sites significant to a particular group reflects failures in recognition that manifest as distributional and procedural shortcomings.

Therefore, achieving spatial justice requires a holistic approach in planning and policy-making. It demands that practitioners move beyond simply mapping inequalities (the outcomes) to critically examining the decision-making processes and underlying societal values that produce them. The goal is not

merely equitable distribution as an end state, but the creation of places and systems where equitable access to resources, services, and opportunities is achieved through fair, inclusive, and respectful processes that recognize the diversity and dignity of all inhabitants. [5] This involves actively challenging discriminatory practices, empowering marginalized communities, and designing planning frameworks that prioritize equity and inclusion across all three dimensions of spatial justice.

### Cross-Border Regions: Shared Challenges, Fragmented Governance

Cross-border regions, defined as areas where functional socio-economic and ecological systems span national boundaries, present a unique and often intensified set of challenges for governance and development. [1] The very presence of an international border introduces inherent complexities that can impede cooperation, exacerbate inequalities, and hinder the sustainable management of shared resources. These challenges arise from fragmented governance, as multiple legal frameworks and administrative procedures coexist, often conflicting across borders. This fragmentation complicates cooperation and resource management, with diverging national standards and varying capacities among authorities impeding effective governance. [12]

Socio-economic asymmetries exacerbate these challenges. Border regions may experience underinvestment and weaker infrastructure compared to central areas, hindering economic performance and increasing costs for cross-border trade. [13] The disparities in income and employment across borders can lead to complex dynamics, including 'brain drain' and wage pressures, though they may also create opportunities for economic complementarity. [13]

Environmental management presents another critical area for cross-border cooperation, as ecosystems do not adhere to political boundaries. Effective governance of shared resources, such as transboundary water bodies, faces challenges from conflicting national interests and differing environmental standards. [13] Additionally, significant infrastructure deficits in border regions limit connectivity and access to services, necessitating coordinated investment efforts that often encounter political hurdles. [13]

The inherent fragmentation of governance, coupled with socio-economic disparities and environmental complexities, renders border regions particularly vulnerable to spatial injustices. Resource distribution and access to opportunities may be uneven. [13]

Achieving procedural justice remains a formidable challenge, as effective multi-level coordination is essential in bridging administrative divides.

## Fostering Spatial Justice Across Borders: International Instruments and Models

Addressing the complex challenges and potential for injustice in cross-border regions requires specific tools, instruments, and governance models that facilitate cooperation and promote equitable outcomes. International practice offers various approaches, differing in formality, scope, and focus.

### Typology of Tools: Agreements, Joint Planning, Resource Sharing, and Participation Models

A foundational element for cross-border cooperation often lies in transboundary agreements. These range from legally binding international treaties (bilateral or multilateral) to less formal Memoranda of Understanding. Key examples relevant to shared resources include the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) [14], the Ramsar Convention on Wetlands [15], and numerous basin-specific agreements governing rivers and lakes like the Prespa Park Agreement [16]. These agreements establish core principles (e.g., equitable and reasonable utilization, obligation not to cause significant harm), procedural rules (e.g., data exchange, notification, consultation), and institutional frameworks for ongoing cooperation. Building on or alongside agreements, various mechanisms facilitate joint planning and management. This can involve developing shared spatial strategies, such as those influenced by the European Spatial Development Perspective (ESDP) or pursued in specific cross-border regions like the Greater Region. [1]. More common are joint management plans for specific resources, such as River Basin Management Plans (RBMPs) often mandated by frameworks like the EU Water Framework Directive (WFD), shared fisheries management plans, or coordinated management plans for transboundary protected areas. Tools like Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) are increasingly applied in transboundary contexts to

evaluate the potential cross-border effects of plans and projects.

Specific resource-sharing mechanisms aim to distribute the benefits and costs associated with shared resources more equitably. These can include formal water allocation agreements defining shares for riparian states, [15] mechanisms for sharing hydropower benefits or trading energy across borders (e.g., the joint Norway-Sweden electricity certificate market), arrangements for joint financing, construction, and operation of cross-border infrastructure (like transport links or shared facilities such as the Cerdanya hospital), [17] and potentially frameworks for sharing the costs of environmental protection or the revenues from resource exploitation.

Enhancing participation models is crucial for procedural justice in transboundary settings. This involves creating structures and processes that allow diverse stakeholders, including local communities, NGOs, indigenous groups, and the private sector, to engage in governance. Examples include multi-stakeholder platforms or advisory councils associated with RBOs and joint committees with explicit NGO and local authority representation (as intended for the Prespa Park Management Committee). [18] Formal public consultation procedures for plans and projects [19], citizen science programs for monitoring, and specific mechanisms to ensure the participation of indigenous peoples in decisions affecting their lands and resources. Ensuring access to information is a prerequisite for meaningful participation. [20]

### Governance Approaches: From Top-Down Coordination to Bottom-Up Collaboration

The governance models employed in cross-border cooperation vary significantly:

**Top-Down Models:** These are typically initiated and led by national governments through intergovernmental agreements. They often result in the creation of formal institutions like RBOs (e.g., International Commission for the Protection of the Danube River, International Sava River Basin Commission) or joint commissions (e.g., International Joint Commission for the US-Canada Great Lakes, International Commission for the Protection of Lake Constance). These bodies focus on high-level coordination, policy harmonization, and implementing treaty obligations. Their strengths lie in their formal authority, access to resources, and ability to address issues from a broader, strategic perspective. However, they can suffer from rigidity, bureaucratic inertia, and a potential disconnect from local realities and needs. [21]

**Bottom-Up Models:** These initiatives emerge from the local or regional level, driven by municipalities, NGOs, community groups, or business associations. Examples include NGO networks like PrespaNet or initiatives facilitated by organizations like the Association of European Border Regions (AEBR) through its b-solutions program. ((AEBR), 2018–2026) ((AEBR), 2018–2026) They often focus on tackling specific, tangible cross-border problems

or fostering people-to-people contacts. Their strengths include flexibility, responsiveness to local needs, and innovation potential. However, they often lack formal power, sustainable funding, and the capacity to address large-scale or systemic issues. [21]

**Networked/Multi-Level Governance Models:** Recognizing the limitations of purely top-down or bottom-up approaches, many contemporary models strive for a networked or multi-level structure. [22] These involve collaboration among actors across different scales (international, national, regional, local) and sectors (public, private, civil society). They aim to combine the strategic direction and resources of higher levels with the local knowledge and engagement of lower levels. This often involves intermediary organizations, such as specialized cross-border structures (e.g., Euroregions, European Groupings of Territorial Cooperation—EGTCs) [23] or NGOs acting as facilitators, conveners, or knowledge brokers, bridging gaps between different actors and levels. [24]

## Lessons Learned from International Experiences

The lessons learned from international experience reveal several vital insights that can guide future initiatives. First, adaptability is crucial; successful strategies must be flexible enough to adjust to different local contexts' unique challenges and opportunities. Collaboration also plays a vital role, as engaging with diverse stakeholders fosters innovative solutions, builds trust, and strengthens the overall impact of projects. Continuous learning is essential; implementing regular assessments and feedback loops allows organizations to refine their approaches and remain relevant in a fast-changing environment. Additionally, understanding cultural nuances is key; being culturally sensitive can significantly enhance the effectiveness of initiatives by ensuring they resonate with local communities. Finally, sustainability must be a priority for long-term success, requiring practices that thoughtfully consider environmental, social, and economic impacts. Together, these lessons provide a solid foundation for navigating complex international landscapes.

## The Prespa Lake Borderland: A Case Study in Spatial (In)Justice

The Prespa Lake borderland offers a rich and complex empirical setting for examining the manifestations and challenges of spatial justice within a transboundary context. Its unique combination of geopolitical divisions, socio-economic conditions, severe environmental pressures, and a long history of cooperation efforts provides valuable insights.

### A. The Multifaceted Context of Prespa

**Geopolitical Landscape:** The region's defining feature is the tripoint border where Greece, an EU member state since 1981, meets North Macedonia and Albania, both EU candidate countries.

Throughout the years, this political configuration has created inherent asymmetries regarding access to EU funding mechanisms (like Interreg, IPA, and LIFE) [25], regulatory frameworks (e.g., alignment with the Water Framework Directive 43 or Natura 2000 network), and overall institutional capacity. Historically, the region experienced border closures, particularly during the communist era in Albania, which severely limited interaction and contributed to economic stagnation. The signing of the Prespa Agreement in 2018 between Greece and North Macedonia, resolving the long-standing name dispute, marked a significant positive development, potentially fostering greater stability and cooperation, although its full implementation remains crucial. 49 Plans for a new border crossing between Lemos (Greece) and Markova Noga (North Macedonia) aim to improve connectivity, which is currently limited, especially between Prespa's Greek and Albanian sides.

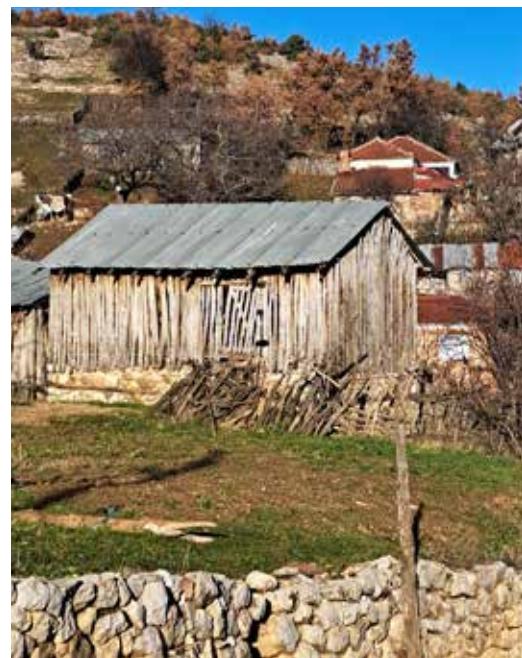
**Socio-Economic Fabric:** The Prespa region is predominantly rural, with agriculture as the mainstay of the local economy, though its nature varies significantly across the borders. North Macedonia's Resen municipality is known for intensive apple cultivation, which dominates the local economy and employment. Greek Prespa focuses heavily on bean monoculture, which has been supported historically by EU subsidies. [26] In contrast, agriculture in Albanian Prespa (Pustec Municipality) appears more subsistence-oriented, with mixed farming (cereals, vegetables, and livestock) for household consumption and limited market integration. Tourism, particularly ecotourism and rural tourism, is recognized as a key potential driver for development across all three countries, leveraging the region's natural beauty and cultural heritage, but remains largely underdeveloped, especially in Albania and North Macedonia. Fishing, once more significant, now provides mainly supplementary income, though it retains cultural importance.

Significant socio-economic disparities exist within the region. Greece, as an EU member, generally exhibits higher income levels and lower unemployment compared to North Macedonia and Albania. However, the Western Macedonian region of Greece faces its own challenges, including low scores in job opportunities, environmental quality, and life satisfaction compared to other Greek regions, though it performs better in education and health access. Both North Macedonia and Greece have experienced significant depopulation in the Prespa area, driven by a lack of economic opportunities and historical factors like the Greek Civil War. [26] Pustec municipality in Albania, while ethnically homogeneous (Macedonian minority), faces challenges of isolation, poor infrastructure, and limited economic diversification beyond subsistence agriculture and livestock.

**Environmental Pressures:** The Prespa basin faces severe and interconnected environmental challenges. The most alarming is the dramatic and accelerating water level decline of Great Prespa



Fig 3/. Village context



source/ author Pustec (2023)

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Lake, dropping by 8-10 meters since the mid-20th century, with significant losses in surface area and volume. [27] This decline is driven by a combination of climate change (reduced precipitation, particularly snowfall, and increased evaporation) and anthropogenic pressures, primarily water abstraction for irrigation, though the precise balance between these drivers remains debated. Water quality is another major concern, with widespread eutrophication driven by nutrient inputs (nitrogen, phosphorus) from agricultural runoff (fertilizers, pesticides) and untreated wastewater from settlements. [18] This leads to algal blooms, oxygen depletion (anoxia) in deeper waters, and threats to aquatic life. [27] Biodiversity is under pressure from habitat degradation (loss of wetlands due to drainage and water level decline, forest degradation from logging/grazing) [26], direct threats to species (overfishing, poaching, impact of invasive species, wind farm development affecting bird corridors), and the overarching impacts of climate change, which exacerbate drought and fire risks. Land use changes, including agricultural intensification and expansion, historical deforestation, and infrastructure development, further contribute to these pressures. [26]

**Cultural and Ethnic Dimensions:** Prespa is not just an ecological area but also a region rich in cultural history, evidenced by numerous Byzantine monuments, traditional architecture, and archaeological sites dating back millennia. This heritage is an asset but also requires conservation efforts. The region's population is ethnically diverse, though specific compositions vary locally. A significant factor is the presence of an officially recognized Macedonian minority in Albania, primarily residing in the Pustec Municipality. This group's status, rights (e.g., language use in education and public signage), and political representation

are important considerations within the context of spatial justice, particularly given the region's historical complexities and potential external influences (e.g., Bulgarian citizenship offers).

### Manifestations of Spatial Injustice in Prespa

The complex context described above manifests in several specific spatial justice challenges across the Prespa borderland:

**Unequal Access: Water Resources, Infrastructure, and Services**

**Water:** Great Prespa's declining water levels, exacerbated by climate change and abstraction, raise distributional justice concerns. [27] Intensive agriculture, such as apple orchards in North Macedonia and bean fields in Greece, relies heavily on irrigation from the lake system. [26] Upstream water usage for lucrative agriculture could adversely impact downstream ecological needs and availability for Albanian communities in a less developed sector. [28] The lack of coordinated management intensifies this injustice. [14] Pollution from agriculture and untreated sewage further compromises access to clean water, affecting those depending on surface or near-shore groundwater.

**Infrastructure:** Significant disparities exist. With EU support, Greece has better transport and environmental infrastructure than Albania and North Macedonia, where rural areas experience inadequate wastewater treatment, resulting in direct lake discharge. The absence of a border crossing between Pustec (Albania) and Greece limits movement and access, leading to unequal service access and economic development disparities. [29]

**Social Services:** Healthcare and education access vary across borders. Although reforms in North Macedonia and Albania aim to improve social protection, challenges persist, especially in remote



Fig 4/. Village context



source/ author Pustec (2023)

areas like Prespa. Cross-border mobile health units are proposed to address these access issues, acknowledging current inequities. [30]

### Economic Opportunity Gaps: Sectoral and Geographic Imbalances

The differing economic structures and levels of development create significant spatial inequalities in opportunity. Farmers in Greece and North Macedonia engaged in more intensive, market-oriented agriculture (beans, apples) and likely have different economic prospects and access to support (e.g., EU CAP subsidies in Greece, though specific Prespa data is limited [31]) compared to subsistence farmers in Albania. [28] The lack of processing and marketing infrastructure within Pustec severely limits the ability of local producers to add value or access wider markets. Tourism development, identified as a key potential sector, is uneven, with infrastructure and services lagging significantly in Albania and North Macedonia compared to Greece or the nearby Ohrid region. This creates geographic imbalances that prevent the region from benefiting from its natural and cultural assets. Environmental degradation further threatens economic opportunities, particularly for those directly dependent on agriculture and fisheries, potentially exacerbating existing poverty. [18] The lack of diverse economic alternatives makes communities highly vulnerable to shocks in the agricultural sector or environmental changes.

### Issues of Recognition and Marginalization (e.g., Pustec)

The situation of the Macedonian minority in Pustec, Albania, exemplifies the recognition dimension of spatial justice. While officially recognized within this municipality, questions remain about the effective implementation of minority rights, such

as adequate provision of Macedonian-language education, bilingual signage, and meaningful political participation at local and national levels. [32] Reports suggest limitations and potential pressures, including individuals seeking Bulgarian citizenship for EU access. Pustec's geographic isolation within Albania and strong socio-cultural and economic ties to North Macedonia create a unique situation where national borders significantly impact daily life and access. Legal and administrative obstacles at the border [33] and the lack of a direct crossing to Greece can spatially disadvantage this community, limiting access to services, markets, and opportunities in neighboring countries. Failure to adequately recognize and address these specific circumstances in national and transboundary planning constitutes a form of spatial injustice.

**Environmental Burdens and Benefits Distribution**  
The distribution of environmental costs and benefits appears uneven. Intensive agricultural practices in Greece and North Macedonia, while generating economic benefits for those involved, contribute significantly to water pollution (pesticides, fertilizers) and water abstraction pressures, the negative consequences of which (eutrophication, lower lake levels) are shared across the basin, potentially impacting Albanian communities and the overall ecosystem health more severely. [18] Similarly, the benefits of conservation efforts, such as potential revenue from well-managed ecotourism in protected areas, may not be equitably distributed, particularly if infrastructure development and access remain concentrated on one side of the border or benefit external actors more than local communities. Addressing environmental burdens like waste management also shows disparities, with inadequate systems in Pustec leading to open dumping and burning, posing local health risks, and

contributing to lake pollution.

## Evaluating Cross-Border Cooperation Mechanisms

Numerous mechanisms have been established over the past decades to foster cooperation in the Prespa basin. Evaluating their effectiveness, particularly through a spatial justice lens, reveals both progress and persistent challenges.

The Prespa Park Agreement (2010) and PPMC: The Prespa Park Agreement (2010) is the cornerstone of formal transboundary cooperation, signed by Albania, Greece, North Macedonia, and the EU. This legally binding agreement aims for integrated ecosystem protection and sustainable development, emphasizing sustainable water management, biodiversity conservation, and sustainable agriculture and waste management. It established the Prespa Park Management Committee (PPMC) to coordinate efforts, replacing the earlier Prespa Park Coordination Committee (PPCC). [3] The PPMC includes representatives from relevant ministries, local authorities, and environmental NGOs, striving for multi-stakeholder involvement, along with a dedicated Working Group on Water Management (WGWM). However, the implementation of the 2010 Agreement faced delays. Ratification processes, especially in Greece and Albania, were slow and affected by geopolitical issues, resulting in the PPMC and WGWM holding inaugural meetings in June 2022, twelve years post-signing. Early assessments of the PPCC highlighted challenges such as a lack of funding, reliance on ad hoc support, weak legal standing, and insufficient political commitment. Despite the PPMC/WGWM's recent operationalization, its long-term effectiveness in addressing deep-rooted issues of water allocation, pollution control, and socio-economic disparities remains uncertain. Current activities include developing roadmaps and prioritizing monitoring and updates to the Strategic Action Plan (SAP). Relying on NGOs like SPP for secretariat functions raises concerns about capacity within state structures. [32]

The Role of NGO Networks: PrespaNet has been vital in fostering transboundary cooperation since its 2013 establishment, building on the Society for the Protection of Prespa's earlier efforts in Greece. ((INWEB), 2004) Comprising SPP, the Macedonian Ecological Society (MES), and PPNEA, PrespaNet aims to enhance NGO-led conservation, collaborate with authorities, and engage civil society. Key donor-funded activities include transboundary monitoring and research, environmental education, promoting sustainable practices, and policy advocacy. PrespaNet has established a local NGO presence in Resen (NM) and Pustec (AL), generating valuable data and building capacity among NGOs and protected areas. From a spatial justice perspective, PrespaNet significantly contributes to procedural justice through stakeholder engagement and indirectly addresses distributional concerns.

Interreg and Other Donor-Funded Initiatives: External funding has been crucial in supporting

conservation and development in Prespa. Key initiatives include: (i) UNDP/GEF Integrated Ecosystem Management Project, which is focused on incorporating ecosystem management into sectoral practices and strengthening national capacities in Albania and North Macedonia. (ii) UNDP/SDC Lake Restoration Project aimed at reducing environmental pollution and improving management practices. (iii) Prespa Ohrid Nature Trust provides long-term funding for protected area authorities and NGOs in the wider Prespa-Ohrid region. (iv) EU funding supports cross-border infrastructure, environmental protection, and institutional cooperation under various action plans. Evaluation of these initiatives shows positive contributions, particularly in sustainable practices and dialogue. [18] However, their effectiveness is often limited by their project-based nature and reliance on external funding, raising concerns about the sustainability of outcomes once funding ends. [3]

## Overall Assessment: Successes, Failures, and Obstacles in Addressing Spatial Justice

Synthesizing the evaluations, cooperation in Prespa has successfully established platforms for transboundary dialogue (PPCC/PPMC, PrespaNet), generated crucial environmental data, piloted sustainable agricultural and waste management practices (especially in NM), and fostered awareness and local participation to some extent.

However, significant failures and obstacles persist in terms of spatial justice. Distributional justice remains challenged by the unresolved (or poorly managed) transboundary water allocation issues amidst severe water level decline, persistent pollution impacting shared resources, significant infrastructure gaps limiting access to services (particularly in AL/NM), and vast economic disparities that hinder equitable development. [34] Procedural justice suffers from the historical weakness and slow operationalization of the formal PPMC structure, lack of enforcement power, potential capacity gaps within national and local institutions, and questions about the extent to which local communities, especially marginalized groups like the Pustec minority, can meaningfully influence key decisions on resource management and development priorities. [35] Recognitional justice issues are evident in the need for better integration of minority rights and needs (Pustec) into planning processes and ensuring that the diverse cultural values of the region are respected alongside environmental and economic goals. [36] The overall picture suggests that while cooperation exists, it often remains fragmented, project-dependent, and insufficient to address the scale and complexity of the spatial injustices present in the Prespa borderland. Despite decades of cooperation efforts and substantial donor investment, the persistence of significant environmental and socio-economic challenges in Prespa points towards a critical disconnect

between project-level interventions and achieving systemic change necessary for spatial justice. [18] While numerous initiatives have yielded localized successes, such as piloting sustainable agricultural practices or establishing dialogue platforms, they appear insufficient to overcome the deeply entrenched problems rooted in fragmented transboundary governance, conflicting resource demands (especially concerning water allocation between agriculture and ecosystem needs), and fundamental inequalities in infrastructure and economic opportunities, particularly those amplified by the EU/non-EU political divide. [37] The delayed operationalization of the formal PPMC structure further exemplifies the difficulty in translating high-level agreements into effective, on-the-ground action capable of comprehensively addressing these complex spatial justice issues. [16]

### Synthesis: Lessons from Prespa for Spatial Justice

The Prespa Lake borderland case study offers significant insights into the theory and practice of spatial justice, particularly in complex transboundary settings. It yields lessons that resonate beyond the typical European regional context often dominated by studies within the EU's internal borders.

### Prespa's Contribution to Understanding Spatial Justice Beyond Europe

Prespa's unique configuration—a tri-national borderland involving an EU member state (Greece) and two EU candidate countries (Albania, North Macedonia) with differing levels of economic development, institutional capacity, and integration with European frameworks—provides a valuable counterpoint to studies focused on more homogenous or economically integrated border regions within the EU. It illustrates how political boundaries superimposed on a shared ecosystem and historical landscape interact with differing national development trajectories and governance systems to produce profound spatial inequalities. The case highlights the critical importance of the transboundary dimension in spatial justice analysis. Issues like water resource management, pollution control, biodiversity conservation, and infrastructure development cannot be adequately understood or addressed solely within national frameworks. [38] The upstream-downstream dynamics in water use and pollution, the cross-border movement of species (and potentially people seeking opportunities), and the fragmented nature of infrastructure networks demonstrate how justice outcomes in one part of the basin are intrinsically linked to actions and conditions in others. Prespa underscores that achieving spatial justice in such contexts necessitates robust cross-border governance mechanisms capable of equitably mediating competing interests and coordinating action. Furthermore, Prespa highlights the challenges of achieving procedural justice in multi-level, multi-actor transboundary settings with significant power and capacity imbalances.

The long delay in operationalizing the formal Prespa Park Agreement and the reliance on NGOs and external donors highlight the difficulties in building sustained political will, institutional capacity, and effective participatory processes across borders, especially when dealing with sensitive issues like resource allocation or minority rights. [16] It suggests that formal agreements, while necessary, are insufficient without commensurate investment in institutional strengthening, trust-building, and mechanisms for genuine stakeholder engagement at all levels, including local communities, often most affected by decisions. [39]

The recognized Macedonian minority in Pustec, Albania, brings the dimension of recognition justice to the forefront. It demonstrates how concerns of spatial justice intersect with minority rights, cultural identity, and historical legacies in border regions. Ensuring that the specific needs, vulnerabilities, and aspirations of such groups are acknowledged and addressed within national policies and transboundary cooperation frameworks is essential for achieving truly equitable development. Pustec's situation highlights the necessity of looking beyond majority populations and considering how spatial arrangements and governance processes impact distinct minority groups located in border zones.

### Implications for Spatial Justice Theory and Practice

The Prespa case reinforces the theoretical understanding of spatial justice as multi-dimensional, encompassing distributional, procedural, and recognition aspects. [40] It vividly demonstrates how these dimensions are intertwined in a real-world setting: distributional inequalities (e.g., water access, economic opportunity) are often rooted in procedural flaws (weak governance, lack of participation) and failures of recognition (ignoring downstream impacts or minority needs). Practically, Prespa underscores the limitations of purely project-based approaches to addressing deep-seated spatial injustices in complex regions. [18] While projects can pilot solutions and build capacity, they often fail to achieve systemic change without being embedded within effective, long-term governance structures and addressing underlying power imbalances and resource conflicts. It highlights the need to shift towards more integrated, adaptive, and place-based strategies that combine environmental protection with equitable socio-economic development, explicitly addressing distributional outcomes, procedural fairness, and recognition of all affected communities. The case also emphasizes the crucial role of non-state actors, particularly locally based NGOs like those in the PrespaNet network, in bridging governance gaps, fostering transboundary communication, generating knowledge, and engaging communities. However, it also points to the need for better integration and support for these actors within formal governance frameworks to ensure the sustainability and

scalability of their efforts. Finally, Prespa is a potent example of how environmental and spatial justice intersect. The severe environmental degradation, particularly concerning the shared water resources, disproportionately affects the livelihoods and well-being of local communities, especially those most dependent on agriculture and fisheries. Achieving environmental sustainability in Prespa is thus inseparable from achieving spatial justice, requiring solutions addressing ecological health and equitable access to resources and opportunities for all inhabitants across the three countries. The intricate interplay between severe environmental vulnerability (water crisis, climate change impacts), geopolitical fragmentation (EU/non-EU border), historical complexities, and persistent socio-economic disparities makes Prespa a critical case for understanding the profound challenges—and the absolute necessity—of pursuing spatial justice in shared, contested, and ecologically fragile borderlands globally.

## Conclusion

The Prespa Lake borderland, a region of extraordinary ecological and cultural significance shared by Albania, Greece, and North Macedonia, stands as a critical juncture where the challenges of transboundary governance, environmental sustainability, and socio-economic development converge. This paper has applied the lens of spatial justice—encompassing distributional equity, procedural fairness, and recognition of diverse communities—to analyze the complex dynamics at play in this unique tripont.

The analysis reveals a landscape marked by significant spatial injustices. Profound environmental crises, most notably the alarming decline in lake water levels and persistent water pollution, intersect with considerable socio-economic disparities between the EU-member state (Greece) and the candidate countries (Albania, North Macedonia). Access to essential resources like clean water, adequate infrastructure (transport, sanitation, energy), social services, and equitable economic opportunities is unevenly distributed across the border, often reflecting historical legacies, differing national capacities, and the fragmented nature of governance. Procedural justice is hampered by the slow operationalization of formal transboundary institutions like the PPMC and the challenges of ensuring meaningful participation for all stakeholders, including local communities and minorities like the Macedonian population in Pustec. Issues of recognition, particularly concerning minority rights and the integration of local knowledge, further compound these challenges. While numerous cross-border cooperation initiatives—driven by international agreements, donor funding, and dedicated NGO networks like PrespaNet—have been undertaken over several decades, achieving notable successes in areas like piloting sustainable practices, generating data, and fostering dialogue, they have proven insufficient to address the systemic roots of spatial injustice in the

region. A persistent gap exists between project-based interventions and the transformative, long-term, integrated governance required to manage shared resources sustainably and ensure equitable development for all inhabitants.

Fostering spatial justice in Prespa demands a concerted and multifaceted approach. Strengthening the formal PPMC structure with adequate resources and political commitment is crucial but must be coupled with enhanced mechanisms for genuine multi-stakeholder participation, particularly empowering local communities and NGOs. Addressing the critical water crisis requires binding, equitable transboundary protocols for water allocation and pollution control, grounded in shared data and monitoring. Targeted investments are needed to bridge infrastructure gaps and promote sustainable livelihoods, particularly in disadvantaged areas, focusing on water efficiency, renewable energy, waste management, and inclusive ecotourism. Explicit attention must be paid to ensuring the rights and recognition of minority groups.

The Prespa case offers vital lessons for understanding and promoting spatial justice in other complex borderlands globally. It underscores the necessity of analyzing justice through an explicitly spatial lens, recognizing the profound impact of borders and geography on the distribution of opportunities and burdens. It highlights the limitations of fragmented or purely top-down governance and emphasizes the need for integrated, multi-level, participatory approaches that bridge national divides and empower local actors. Ultimately, achieving a sustainable and just future for Prespa requires moving beyond ad-hoc projects towards building resilient, equitable, and collaborative governance systems capable of navigating the inherent complexities of this shared natural and human landscape. The path is challenging, but the imperative—for the environment, for the people of Prespa, and the principles of regional cooperation and stability—is clear.

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