Vol. 3(1): 25-52 (2026)

Journal of Regenerative Economics

DOI 10.5937/jre2601025B

PLANNING BEYOND ADMINISTRATIVE BORDERS: NON-STANDARD GEOGRAPHIES AND TRANSBOUNDARY COMMONS IN THE PRESPA LAKE BASIN

Anila Bejko
Faculty of Planning, Environment, and Urban Management,
Polis University, Albania
✉ anila_gjika@universitetipolis.edu.al

Pantoleon Skayannis
POLIS University, Tirana, Albania and Professor Emeritus,
University of Thessaly, Greece
✉ leonska@otenet.gr

Abstract: *The Prespa Lakes region, shared by Albania, Greece, and North Macedonia, is a critical ecological hotspot and an old transboundary landscape that defies standard linear, growth-bound administrative planning paradigms. Positioned at the intersection of European Union environmental directives, national cohesion mandates, and Western Balkan enlargement dynamics, the region still remains economically vulnerable and institutionally fragmented. This paper uses Prespa as a laboratory to unpack the interaction between top-down green transition agendas and state border configurations with the lived realities of peripheral communities and fragile ecosystems. This paper steps back from the usual Eurocentric approaches to regional planning. Instead, it is based on the mutual shaping of space and society, combining a multi-layered understanding of spatial justice in distribution, procedures, and recognition, with three new perspectives: non-standard geographies (ESPON, 2026), epistemic peripherality (Hilton & Pesarini, 2026), and More-Than-Human spatial justice (Fieuw et al., 2022). In this wider lens, the paper explores the continuing environmental collapse and growing social divisions of the basin. It finds that the usual governance centred on the border has not prevented environmental damage nor produced fairness for local communities. The empirical research is based on detailed territorial explorations, land-use mapping and an analysis of regional cooperation mechanisms within the framework of Prespa Park across its tri-national sectors. The findings reveal great inequalities in the distribution of resources and development incentives among the three national zones, showing that local, smallholder agricultural knowledge has been systematically ignored or sidelined by centralised state agendas. While these structural and environmental imbalances impact*

Original scientific paper
Received: 15.06.2026
Accepted: 30.06.2026

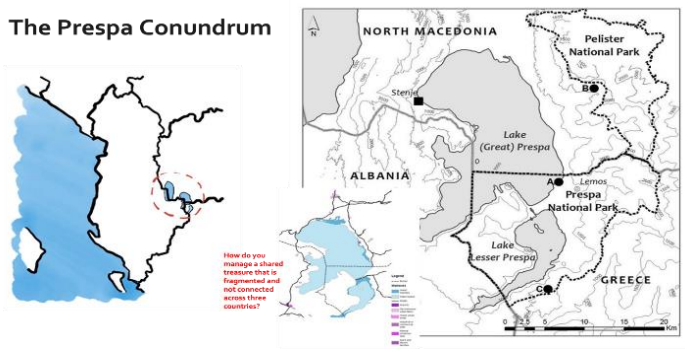
communities throughout the basin—particularly where intensive commercial production methods clash with conservation boundaries—they manifest most acutely within the marginalised Albanian municipality of Pustec. To solve these problems, the paper proposes a forward-looking and landscape-orientated strategy that links cross-border ecological benefits with a flexible approach to regional planning. The framework reimagines traditional farmland as one that benefits communities and the environment in a number of ways. Importantly, the paper discusses the tensions between supporting people's livelihoods and protecting the environment; points to uneven power dynamics along the EU borders; reflects on the risk of academic outsiders taking over local discussions, and charts a path toward a holistic, multi-species cohabitation. It finds that a just and sustainable transition in these sensitive border regions requires a move away from thinking about growth at all costs and a move towards new models of shared knowledge, cross-border cooperation and care for all forms of life.

Keywords: *non-standard geographies, epistemic peripherality, More-Than-Human justice, spatial justice, transboundary governance, Prespa Lakes, Western Balkans, regenerative development.*

1. Introduction: The Prespa conundrum

Nestled in the highlands of the Balkan Peninsula, the ancient Prespa Lakes – Great Prespa and Small Prespa – are a unique ecosystem formed by tectonic forces. These lakes are located on the borders of Albania, Greece and North Macedonia and are an important environmental asset for the whole region. They contain exceptional levels of biodiversity, dense wetlands that are Ramsar Convention sites and a number of overlapping national parks. But this lush, continuous natural landscape is divided by hard national borders that cut across water systems, animal migration corridors, and long-established human communities. This mismatch creates what can be termed the **Prespa conundrum**: *How to govern an interconnected, living ecological masterpiece that is institutionally fragmented and physically disconnected across three distinct nation-states?*

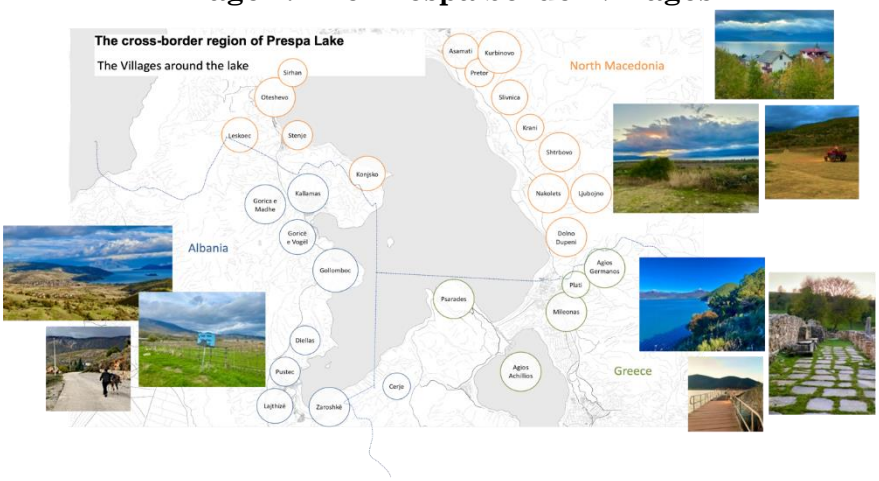
Image 1. The Prespa Conundrum



Transboundary spatial configuration showing the overlap of national borders over the unified lacustrine basin. Drawings: Bejko, Ponti, Romio, Intersecting Landscapes Workshop, Ferrara & Polis University, 2024

The division between institutions in the region is made even more complicated by significant political differences, which translate directly into highly asymmetrical financial capabilities. The Prespa is located right at the edge of the European Union, operating as a stark regulatory fault line. Being an EU member, Greece has structural access to massive internal funding streams—specifically through the European Regional Development Fund (ERDF) and national operational envelopes like the ESPA (National Strategic Reference Framework)—allowing the continuous funding of advanced environmental programmes such as Natura 2000 and the Water Framework Directive. Conversely, Albania and North Macedonia must navigate the shifting enlargement dynamics of the Western Balkans. Their environmental funding is fundamentally restricted to external EU mechanisms, primarily the Instrument for Pre-Accession Assistance (IPA III) and targeted initiatives like the "EU for Prespa" envelope. Because these pre-accession grants are strictly bound to macro-political conditionalities, fixed reform deadlines, and the complex transposition of the EU environmental acquis, the non-EU candidate nations have historically suffered from deep infrastructure deficits and a volatile planning environment tied to changing local institutions.

Image 2. The Prespa border villages



Comprehensive structural mapping of the relational distance and architectural condition of the border villages: Psarades, Agios Germanos, Stenje, Ljubojno, Pustec, and Gorica. Sketch and Photos: Beqiri, Dauti, Erdmann-Goldoni, Intersecting Landscapes Workshop, Ferrara & Polis University, 2024.

These differences translate into very different realities for people and wildlife living around the lakes, driven by divergent regional production structures. While the Greek sector has moved beyond basic primary activities to establish a notable degree of vertical integration—where agricultural products like the Prespa beans are processed, packaged, and promoted alongside active, state-backed cultural tourism events—the other two regions remain structurally constrained. In North Macedonia, places like Konjsko, Stenje, Oteshevo, and Ljubojno across the border are experiencing the negative impacts of intensive, profit-driven apple monocultures. Meanwhile, Albanian villages such as Pustec, Zaroshkë, Gollomboc and Gorica

remain relationally isolated, locked into traditional subsistence farming with little access to modern infrastructure or cross-border ecotourism income networks.

This institutional fragmentation is not an isolated condition but fits into a broader historical pattern across the southern Balkan frontier. As shown by Topaloglou and Petrakos, G., (2008) in their research for the EXLINEA project, the borderlands linking northern Greece, Albania, and North Macedonia represent one of the most fractured political and socioeconomic spaces in Europe. These borders do not merely draw a physical limit; they actively maintain severe asymmetries in living standards, local administrative capacity, and municipal resource access between EU member states and their non-EU neighbours. Traditional top-down planning has historically treated these border regions as disconnected, low-opportunity outposts, attempting to overcome their isolation solely with localised road expansions and infrastructure projects.

But this paper claims that these approaches fail to recognise the complex ecology, local knowledge, and cross-scale and cross-border linkages of the region. Addressing the **Prespa conundrum** requires a planning approach that moves beyond old state-centred maps to improve ecosystems, share knowledge locally and show care for all species at the heart of regional design.

1.1 Project context and author positionality

This paper builds directly upon an international, research-by-design project developed within the framework of the **Intersecting Landscapes Workshop** in December 2023, jointly organised by POLIS University (Tirana) and the International Doctorate in Architecture and Urban Planning (IDAUP) at the University of Ferrara. The spatial concepts, strategic playbook, and local prototypes presented herein are adapted from the collaborative design and field research executed by a core multidisciplinary team of architects and urban planners, consisting of Dr. Kejt Dhrami (POLIS University), Alessandro delli Ponti (Ferrara University/IDAUP), Anila Bejko (POLIS University/IDAUP), and Francesco Axel Pio Romio (Ferrara University/IDAUP), with the structural advice and scientific guidance of Prof. Skayannis. Accordingly, use of the authorial "we" throughout the projective and visionary sections of this paper denotes the collective findings of this design-research framework. Rather than operating as an isolated, top-down academic commentary, this work functions as an ongoing, grounded collaboration aimed at advancing spatial justice and ecological restoration in the Prespa–Ohrid lake region, with a dedicated operational focus on the Pustec municipality in Albania.

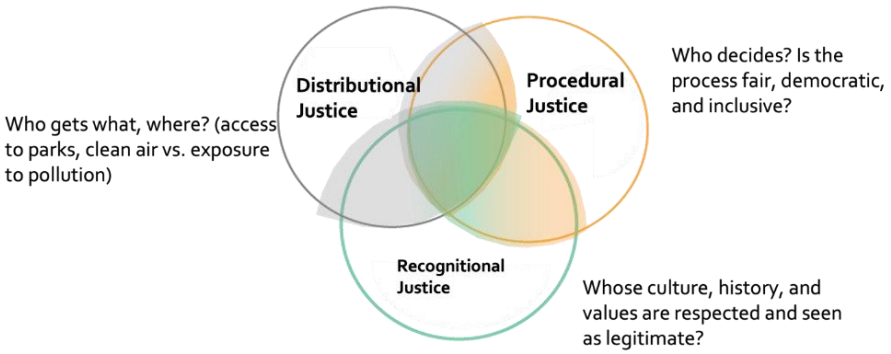
For clarity of scholarly attribution: the two named authors of this paper are solely responsible for its analytical framework, arguments, and conclusions, and for any errors herein. The spatial concepts, prototypes, and drawings originating from the wider Ferrara–POLIS team are used here with that team's permission and are cited throughout to their original outlet, Dhrami et al. (2025), where the full multidisciplinary team receives primary authorial credit. Readers seeking the original, complete design-research contribution—including the work of Dr. Kejt

Dhrami, Alessandro delli Ponti, and Francesco Axel Pio Romio—should consult that source directly rather than treating this paper as a substitute for it.

2. Theoretical scaffolding: Beyond the administrative boundaries

In order to decode the structural inequalities and ecological vulnerabilities embedded within the Prespa borderland, planners must abandon the cartographic myth that space is a neutral container. The analysis in this paper is situated within the *socio-spatial dialectic* theorised by Harvey (1973) and Soja (1989, 2010), which posits that space is an active product of social, political, and power relations which, in turn, shape, reinforce, and fracture them. Spatial justice is operationalised not only as an evaluation of end-state maps but also as an ongoing struggle across three interrelated dimensions (Soja, 2010):

Image 3. Dimensions of Spatial Justice



- **Distributional Justice:** The geographical fairness of spatial allocations, including who gets what and where, including economic development opportunities and resources, infrastructure grids, and access to clean water versus the concentration of environmental burdens.
- **Procedural Justice:** The democratisation of spatial decision-making systems, asking who decides and how. This dimension demands absolute institutional transparency and actively champions the right of local populations to shape and contest regional "resource agendas"—meaning the official priorities, statutory plans, and public budgets that dictate how local land, capital, and common natural resources are deployed—thus strengthening, where possible, bottom-up and participatory planning processes.
- **Recognitional Justice***:* The institutional acknowledgement and overt incorporation of diverse cultural identities, traditional patterns of life, and subaltern histories within regulatory frameworks (Fraser, 2009).

Operationalising this spatial justice triad within regional planning requires moving from abstract definitions to context-rooted indicators. In the Greek planning context, Topaloglou (2020) operationalises spatial justice by examining how top-down

centralised policies fail to match the real needs of specific localities. His work demonstrates that spatial and social equity cannot be achieved through generic public spending or centralised rules alone; instead, it demands place-based strategies that build local autonomy and establish active dialogue among regional actors. Using this perspective, our analysis of the Prespa basin shifts from a simple mapping of environmental damage to an investigation of how centralised, uncoordinated state choices actively cause spatial injustice for peripheral communities.

While the three interrelated dimensions offer a robust foundation, standard planning interpretations remain heavily bound to the nation-state, treating borderlands through a Eurocentric socioeconomic perspective. To capture the socio-ecological reality of the Western Balkan frontier, this research synthesizes spatial justice with three advanced, non-standard conceptual paradigms (i.e. non-standard geographies, epistemic peripherality, More-Than-Human spatial justice)

2.1. Non-Standard Geographies (The NoStaGeo Framework)

Traditional spatial planning is based on standard geographies: rigid, nested hierarchies of governance such as municipalities, regions, districts, and nation-states. But ecological systems, climate variables, and resource flows operate at flexible scales that systematically disregard these administrative jurisdictions (Cash et al., 2006). The NoStaGeo framework focuses on four (interrelated) fields, namely water supply, ecological connectivity, industrial transitions and energy saving (ESPON, 2026).

A *non-standard geography* is a functional territory defined not by legal-administrative boundaries but by functional, ecological, or metabolic flows (ESPON, 2026). In this regard, the planning thresholds are determined by the natural limits of the catchment area, the subterranean movement of groundwater tables, and the trans-scalar networks of habitat corridors. By shifting the planning gaze to a non-standard geography, the Prespa basin is no longer a fragmented periphery of three separate capitals. It is more of an integrated functional landscape that requires fluid, soft-governance structures that prioritise ecological logic (in the frame of the four fields mentioned) over political convenience.

2.2. Epistemic Peripherality/Marginalization

Socio-spatial marginalisation is not merely a function of physical distance or lack of financial capital but is actively reproduced through knowledge extraction and institutional blindness. Critical planning scholarship has explored the phenomenon of **epistemic peripherality**, a condition in which dominant, technocratic discourses of central states and supranational planning agencies have rendered local, traditional, and historical forms of landscape co-management completely invisible or illegitimate.

When enforced, top-down green transition agendas tend to import abstract, generic templates (e.g., rigid carbon-accounting models or growth-orientated templates) (Jasanoff & Kim, 2015). These external interventions consider peripheral communities as “blank spaces” and contradict the lived practical realities on the ground. Epistemic peripherality is the denial of deep contextual insights, vernacular agricultural rhythms and community-led strategies for conserving resources of ‘underdeveloped’ border

populations (Bejko, 2025). An epistemic transition is therefore necessary to achieve recognitional and procedural spatial justice. This means converting of local stories and community skills into valid, guiding tools for territorial strategy, transforming spaces of abandonment into vibrant landscapes of learning, mutual co-production, and care (Dhrami et al., 2025).

2.3. More-Than-Human Spatial Justice

Classical planning theory has restricted the scope of justice to human subjects alone. This anthropocentric bias is a major factor in the environmental degradation of highly sensitive, fragile ecosystems. The concept of More-Than-Human Geographies examines how spatial relations, environments, and socio-ecological processes are co-produced by humans and a wide array of non-human beings, forces, and materialities. By decentering anthropocentric assumptions, this perspective reframes space as an entangled, multispecies field of interaction in which ethical and political responsibilities extend beyond human subjects. In this sense, **More-Than-Human Spatial Justice** extends the normative and analytic scope of planning (Abram, 1996; Whatmore, 2002; Haraway, 2003) to encompass non-human actors such as the lacustrine body itself, endemic fish stocks, avian migration routes, and underground hydrological flows as active agents in the socio-spatial dialectic.

This lens conceptualises the landscape not as a passive resource pool waiting to be allocated by human programs, but as an ancient, living milieu with its own evolutionary rights and long memory, drawing on contemporary philosophies of care and multispecies kinship such as Puig de la Bellacasa's *Matters of Care (2017)* and Haraway's *Staying with the Trouble (2016)*. The greatest distributional injustice in a watershed is the ecological degradation visited upon the ecosystem itself by uncoordinated human extraction. More-than-human justice redefines **design as a practice of territorial curatorship**, setting non-negotiable ecosystemic thresholds within which human development must be carefully inscribed.

It has to be stressed here that the three non-conventional conceptual paradigms can be interrelated. They could be considered to comprise a single epistemic transition from anthropocentric jurisdictions to fluid co-produced landscapes encompassing ecological care, local knowledge and multispecies rights. We nonetheless retain them as three distinct analytical categories, rather than merging them into one, because each does different diagnostic work in the empirical sections that follow: non-standard geographies identifies the mismatch between administrative and ecological boundaries (Section 4.1); epistemic peripherality names the specific mechanism by which local knowledge is delegitimised within that mismatch (Section 4.3); and More-Than-Human justice extends the resulting distributional account to non-human actors (Section 3). Their convergence at the level of normative implication does not, in our view, make them redundant at the level of analytical use.

This is because NoStaGeo repositions Prespa lakes as fluid ecological systems rather than administratively peripheral fragments. In this sense, local knowledge and traditions and multispecies realities are not ignored, and epistemic peripherality is faced. Since these lived practices and ecological rhythms are recognised as legitimate expertise, planning can move toward More-Than-Human spatial justice, where territorial

governance is guided by ecosystemic thresholds, multispecies interdependence, and community-embedded stewardship.

2.4 Methodology: Sensitive Exploration and Research-by-Design

This paper adopts an integrated research-by-design methodology that combines critical spatial analysis with site-specific projective design hypotheses. Methodologically, we advance a practice of "sensitive exploration"—a field-based approach that gathers territorial data by walking, immersive landscape observations, and mapping the spatial layout as a living, trans-scalar system. Rather than treating design simply as an end product, the spatial proposals and prototypes developed during the trilateral workshop serve as an active analytical method. Projecting spatial modules into the landscape allows us to systematically test the limits of top-down regulations, expose hidden institutional barriers, and visualise how abstract concepts like More-Than-Human justice and epistemic recognition can be translated into physical, community-led infrastructure.

This paper's evidentiary base combines two intersecting strands of fieldwork. The first is the intensive, multi-day trilateral design workshop of December 2023, whose spatial outputs are credited throughout to the named members of the Ferrara–POLIS team (see Section 1.1). The second, and empirically primary, strand is the authors' fieldwork on spatial justice in the Prespa borderland, undertaken across repeat visits between 2023 and 2025; it is this longer engagement, rather than the workshop week alone, that grounds the distributional, procedural, and recognitional claims presented in Sections 4 and 7. Conversations with residents, municipal officials, and PrespaNet-affiliated civil society actors in Pustec were also conducted.

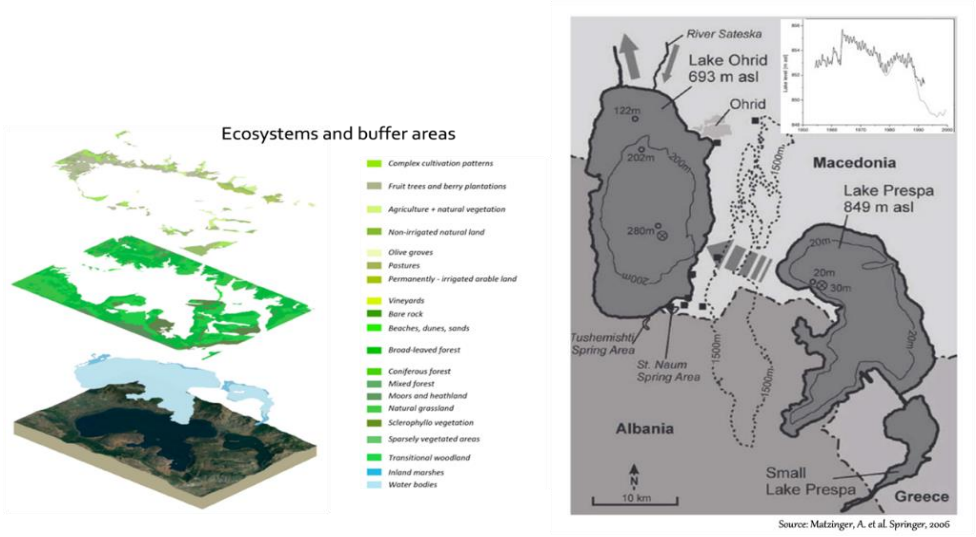
We recognise a methodological tension worth naming directly: a short international workshop of the kind described above is precisely the format that Section 7.1 warns can reproduce epistemic peripherality if visiting researchers treat the borderland as a passive site of observation rather than a site of reciprocal knowledge production. We have tried to mitigate this in three ways: by anchoring the workshop's spatial hypotheses in the authors' longer independent work rather than treating the workshop week as a stand-alone data-gathering exercise; by returning summarised findings to municipal counterparts in Pustec for comment before finalising the projective proposals in Sections 6 and 7; and by crediting local interlocutors as co-holders of the knowledge represented here rather than as informants. That said, this remains a partial safeguard rather than a resolution: the workshop-based prototypes in Section 7 are best read as illustrative design hypotheses that require further, longer-term participatory validation with the Pustec community before implementation, not as findings already co-produced with the same rigour as the distributional analysis in Section 4.

3. The Living Archive: Reappraising the Lacustrine Crisis

The Ohrid-Prespa lacustrine system is an exceptional landscape: one of the world's oldest continuously existing lake systems, where a continuous body of water has existed for about ten million years. (Dhrami et al., 2025) The remarkable temporal depth has thus generated a distinctive evolutionary arena with high levels of species endemism and stratified ecological memory. This basin is not a renewable asset in

planetary terms, not a bundle of natural resources; it is an irreproducible archive of life processes. Its value lies in the integrity of long-term interactions between geology, hydrology, climate, and living species.

Image 4. The looming crisis: A dying Lake



Hydrogeological cross-section illustrating the underground karst connection and water flow from the higher elevation Lake Prespa down through the mountain mass into Lake Ohrid. Sources: Matzinger, A. et al., 2006; Drawing and Maps: Bejko, Shehu, Intersecting Landscapes Workshop, Ferrara & Polis University, 2024.

Today, this ancient planetary archive faces a severe ecologically driven crisis of anthropocentric origin. The most telling sign of this collapse is the dramatic and relentless fall in the water level of Great Prespa Lake, which has **lost between 8 and 10 metres** in water level since the mid-20th century (Matzinger, A. et al., 2006). The loss has dramatically reduced the total surface area of the lake, exposing sensitive littoral ecotones and drying out vital wetland spawning areas.

From a More-Than-Human perspective, this water loss is not merely a quantitative hydrogeological depletion; it is an active violation of the basin's complex bio-world (Trajkovski & Apostolova, 2024). The drying of these wetlands directly decimates the critical spawning grounds of highly vulnerable endemic fish species, such as the Prespa trout (*Salmo peristericus*), the Prespa bleak (*Alburnus belvica*), and the Prespa barbel (*Barbus prespensis*) (Bounas et al. 2021). Concurrently, the contraction of the open water surface disrupts the nesting and foraging habitats of globally threatened avian populations, most notably the Dalmatian pelican (*Pelecanus crispus*) and the pygmy cormorant (*Microcarbo pygmaeus*), which rely on the continuous, undisturbed lacustrine boundary for survival (Verstijnen et al., 2021).

This crisis is a consequence of a destructive intersection of changing climate patterns (reduced winter snowfall, increased summer evaporation rates) and uncoordinated, intensive human water extraction for agricultural irrigation across the

catchment boundaries (Trajkovski & Apostolova, 2024). Great Prespa Lake is hydrogeologically connected to the lower Lake Ohrid through downstream subterranean karst channels; thus, this water loss threatens the stability of the whole regional macro-ecosystem (Matzinger et al., 2006).

The basin is also experiencing serious deterioration in water quality. For decades intensive agriculture in the upstream sectors has delivered huge loads of nutrients, nitrogen and phosphorus, to the lacustrine system via surface runoffs. Such heavy nutrient pollution has led to widespread eutrophication and recurrent toxic algal blooms and acute anoxia (oxygen depletion) in deeper layers of the water column. These toxic algal blooms introduce severe ecological shocks, causing mass mortality events among the ancient underwater benthic communities and endemic malacofauna that have inhabited the lake floor for millions of years (Trajkovski & Apostolova, 2024).

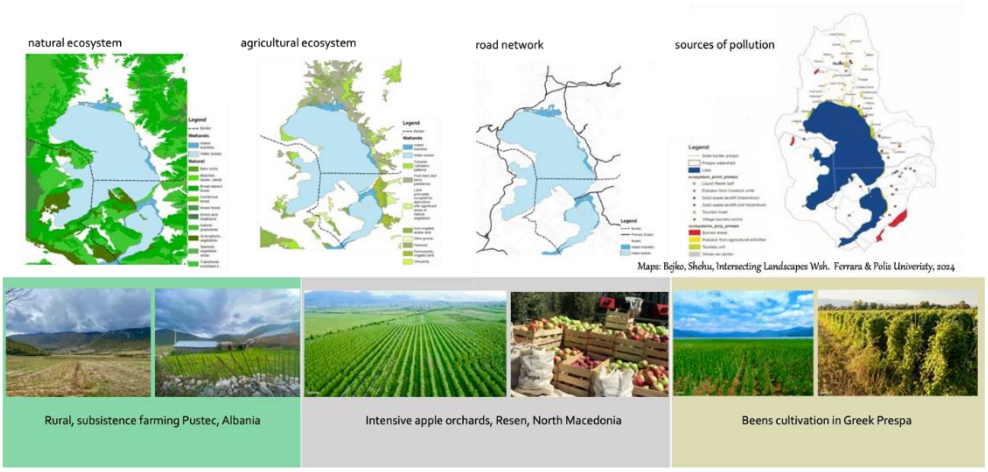
From a More-Than-Human perspective, this environmental collapse is a direct spatial injustice: the fragmentation of a continuous hydrological-ecological continuum by national borders which are incapable of regulating cumulative cross-border impacts. But here is where a tension arises: **the demands of More-Than-Human justice versus human distributional equity**. Where transboundary governance imposes a hard cap or abrupt end to water extraction to recover the lake's hydrological store, the short-term material cost will be unevenly distributed across the borderland. Capitalised Greek bean farmers have the infrastructural reserves and safety nets to bear water extraction caps, but Pustec's households would be immediately economically devastated. Thus, a More-Than-Human transition cannot be divorced from human spatial justice; it requires structural transboundary compensation to mitigate the impacts of ecological policy shocks on vulnerable populations.

4. Empirical Realities: Mapping the Asymmetries

When viewed through the combined lens of spatial justice, non-standard geographies, and epistemic peripherality, empirical fieldwork and institutional reviews reveal that the Prespa borderland is deeply fractured by overlapping distributional, procedural, and recognitional inequalities (Bejko, 2025).

A note on evidence and its limits is warranted before presenting these asymmetries. The quantitative figures below are drawn from sources of uneven vintage—some, such as the fungicide-loading data (RESEN AEA, 2005) and the land-fragmentation and remittance-dependency figures (Grazhdani, 2018), predate this study by up to two decades—and are triangulated, where independent statistics were unavailable, against the authors' own fieldwork-based analysis. We present them as indicative of persistent structural asymmetries rather than as a real-time audit, and we flag that updated municipal- and basin-level data collection, ideally independent of this research team, would strengthen future iterations of this analysis.

Image 5: Comparative spatial analysis mapping the intensive agricultural grids of Resen, the subsidised CAP monocultures of Greek Prespa, and the disconnected subsistence plots of Pustec.



Maps: Bejko, Shehu, Intersecting Landscapes Workshop, Ferrara & Polis University, 2024; Photos: Bejko & Getty Images, 2024.

4.1. Distributional Asymmetries: The Fragmented Continuum

The analysis of land use and space reveals a strong polarisation of environmental assets, infrastructure investments and economic opportunities along national borders, dividing a single non-standard geography into three incompatible spatial systems:

1. **The North Macedonian Sector (Resen Municipality):** Dominated by intensive, market-orientated apple monocultures that engage 70% of the local workforce and generate 30% of municipal income (UNDP, 2018). It acts also as one of the major point sources of ecological stress, historically discharging over 64 tonnes of chemical fungicides and insecticides annually into the lake's tributaries (Agricultural Extension Agency – Resen [RESEN AEA], 2005).

2. **The Greek Sector (Prespa National Park):** Is centred on a highly specialised, commercial bean monoculture employing 85% of the local population (Grazhdani, 2018). Far from operating on a subsistence margin, this area has been heavily capitalised by large EU Common Agricultural Policy (CAP) subsidies yielding up to 283 Euro per hectare in direct income support, integrated into precision farming networks, and backed by the institutional infrastructure of the *Pelekanos Cooperative* (European Commission 2024; SPP, 2015). This capital deepening results in significantly higher relative incomes and a suppressed local unemployment rate of approximately 12% (Grazhdani, 2018).

3. **The Albanian Sector (Pustec Municipality):** Inhabited predominantly by an ethnic Macedonian minority population, this region has historically been shaped by its extreme frontier position. Long-term geographical isolation and a structural pattern of central state underinvestment have led to the dominance of vulnerable, subsistence-orientated mixed farming systems. Arable land is highly fragmented, with 70% of parcels limited to low-yield domestic cereals (Grazhdani, 2018). Operating with negligible capital

of state infrastructure, households exhibit severe structural vulnerability, with up to 30% of local income dependent on cross-border remittances (Grazhdani, 2018).

These stark socio-economic divisions are compounded by extreme infrastructural deficits. The Greek side has centralised municipal wastewater treatment and automated water quality monitoring, but the Albanian and North Macedonian sectors are hamstrung by lagging waste-treatment grids and often dump untreated domestic effluent into the shared watershed.

Cross-border mobility also remains structurally restricted. Geopolitical inertia continues to hold up the long-awaited reopening of the Markova Noga–Lemos crossing between North Macedonia and Greece. This represents a severe disruption of local flows; it enforces a painful spatial division upon a local population while blocking vital local market transactions and the fluid exchange of vernacular goods. By freezing these everyday socio-economic channels, the closure leaves the neighbouring municipality of Pustec relationally isolated. At the same time, it skews the benefits of regional ecotourism toward the Greek nodes, which enjoy a significant relative developmental advantage and better access to institutional funding compared to the rest of the fractured basin.

This spatial imbalance is historically rooted in the highly uneven trajectories of local asset investments and investments across the borderland. On the Greek side, small-scale tourism growth has been systematically supported by combining public EU rural development funding (such as LEADER and INTERREG programmes) with local private initiatives to build a functioning, low-impact eco-tourism PPP ecosystem. Conversely, in the Albanian and North Macedonian sectors, the history of local investment is marked by structural delays and institutional neglect. Consequently, private investment in the peripheral sectors remains fragmented, isolated, and unable to build the collaborative public-private networks required to balance the transboundary tourism economy.

4.2 Procedural Asymmetries: The Technocratic Void

The history of transboundary cooperation in the Prespa basin shows a significant procedural gap between high-level diplomatic statements and the practical realities of governance on the ground.

The **Prespa Park Initiative** was pioneered in 2000 as the first transboundary protected area in the Balkans. Later, this was formalised by national prime ministers and the EU by signing the legally binding **Prespa Park Agreement** in 2010. However, the formal ratification and implementation process was frozen for over a decade due to macro-political frictions at the state level—most notably the prolonged geopolitical deadlock between Greece and North Macedonia over the latter's constitutional name. This structural stalemate effectively prevented any formal interstate regulatory mechanisms from functioning within the shared watershed. Following the diplomatic resolution achieved by the **2018 Prespa Agreement**, these international barriers were dismantled, allowing the official **Prespa Park Management Committee (PPMC)** and its transboundary Working Group on Water Management to hold their first inaugural meetings in June 2022, twelve full years after the treaty's original signing.

Image 6. Procedural injustice, a failure of governance



Institutional timeline tracing the 25-year delay in formalising the Prespa Park Management Committee against the bottom-up actions of civil society. Timeline Graph. A. Bejko, 2025.

This institutional inertia has recently triggered renewed political and administrative urgency from local practitioners. As documented by Petrakos, M. et al (2024), in their policy memorandum, municipal officials across the borderland have actively initiated a push to implement a European Grouping of Territorial Cooperation (EGTC) as a formalised legal vehicle to break the state-centric deadlock. While this practitioner-led momentum provides vital primary-adjacent evidence that the EGTC is a highly relevant, live proposal on the current policy agenda, a critical analytical gap remains. Practitioner accounts tend to frame the EGTC as a largely sufficient legal-institutional fix. In contrast, this paper argues that a standard, off-the-shelf EGTC model risks failing if it underestimates the deep epistemic and distributional asymmetries embedded within this specific non-standard geography.

During this long period of institutional vacuum, the vital work of ecological monitoring and transboundary dialogue was kept alive almost exclusively by bottom-up civic networks organised under the **PrespaNet alliance**. This collaborative network of local NGOs, such as the Society for the Protection of Prespa (SPP) in Greece, the Macedonian Ecological Society (MES), and PPNEA in Albania, has achieved remarkable localised wins in environmental education, bird counts, and transboundary volunteerism.

But these civic networks rely on short-term and uncertain donor funding and have no formal regulatory authority or enforcement capacity. At the same time, local municipal authorities, especially the Pustec Municipality, remain structurally excluded, without any formal legal or financial instruments to influence international water-sharing protocols or top-down agricultural agendas dictated by distant national capitals (Bejko, 2025).

4.3 Recognitional Asymmetries: Epistemic Peripherality in Pustec

The ethnic Macedonian minority in the Pustec municipality in Albania is a clear example of injustice in terms of recognition and epistemic peripherality. This population is systematically marginalised by national planning frameworks that are centralised and urban-biased, consistently privileging large-scale infrastructure and mobility-led tourism clusters elsewhere, with Pustec disconnected from primary national networks.

Image 7. Recognition injustice/epistemic peripherality



Sketch and Photos: Bejko, Beqiri, Dauti, Erdmann-Goldoni, Intersecting Landscapes Workshop, Ferrara & Polis University, 2024.

This marginalisation is deeply epistemic. Technocratic practices at the national and international level do not take into account the traditional, low-impact agrarian practices of the Pustec community, the context-specific water management methods and the generations of ecological knowledge. Top-down conservation regulations are often enacted without consideration of local subsistence needs, rendering local livelihoods illegal while failing to regulate the large-scale upstream chemical runoffs originating from intensive commercial sectors across the border (Bejko, 2025). Without local processing facilities, economic support, or a voice in governance, the youth of Pustec are caught in a severe demographic drain, often seeking external citizenship to migrate out of the region. Ignoring the protective role and the local knowledge of this border community jeopardises regional green initiatives, turning Pustec into a space of increased socio-ecological vulnerability.

5. Review of Non-Standard International Planning Tools

Handling an open ecological repository that completely surpasses the parameters of state line management calls for a radical departure from inflexible administrative tools to flexible, multi-scalar international frameworks. It is important to assess the existing international models that have tried to solve the transboundary spatial and environmental fragmentation before implementing a certain design strategy. Each

tool has a distinct legal form, operational tier and capacity to address distributional, procedural or More-Than-Human spatial justice issues.

The text critically analyses three main models (United Nations Economic Commission for Europe (UNECE) Water Convention, European Grouping of Territorial Cooperation (EGTC), and Multi-Level Basin Organisations) to systematically compare these instruments. The structural typologies, applications of justice, and systemic fragilities of these instruments are collected and synthesised below, drawing from their primary founding legal frameworks: the UNECE Water Convention (1992); the European Parliament and Council Regulation (EC) No 1082/2006 establishing the EGTC legal tool; and the seminal multi-level networked governance paradigms established by Ostrom (1990, 2010) for resource commissions.

The comparison below is qualitative rather than scored: each instrument is assessed against the same three questions—which dimension(s) of the spatial-justice triad it is legally or operationally equipped to address, what its founding legal text obliges it to do, and what practitioner and secondary-source evidence (principally Petrakos et al., 2024, and the EGTC case literature) says about its performance in asymmetric, partly non-EU settings. This is offered as an interpretive synthesis for policy orientation rather than a systematic, criterion-scored institutional audit, which would require a dedicated comparative study beyond the scope of this paper.

Table 1. Comparative Analysis of Transboundary Planning Instruments, Justice Dimensions, and Systemic Fragilities.

Planning Instrument / Model	Theoretical Typology & Framework	Application to Transboundary Spatial & Multi-Species Justice	Key Strengths & Potential Systemic Fragilities
UNECE Water Convention (1992)	Basin-Wide Treaty-based Governance.	**Distributional & Multi-Species:** Promotes equitable water utilisation across states and obligates parties to prevent cross-border environmental harm.	Robust international legal authority; prone to structural gridlock if national enforcement capacities are highly asymmetrical.
European Grouping of Territorial Cooperation (EGTC)	Cross-Border Soft-Governance Entity.	**Procedural & Recognitional:** Empowers local authorities across borders to form unified legal bodies to co-manage shared environmental commons directly.	Strengths: Directly bypasses central ministry bottlenecks; successfully demonstrated in high-capitalisation EU environments (e.g., ZASNET, Alpi Marittime–Mercantour, Duero-Douro). Fragilities: Highly prone to legal bottlenecks and institutional paralysis when applied across asymmetric external EU frontiers involving non-member states
Multi-Level Basin Commissions	Polycentric Networked Governance (Ostrom, 2010).	**Procedural & Epistemic:** Integrates top-down state authority with structured, bottom-up participation from local communities and civic networks.	Coordinates continuous ecological landscapes across scales; can suffer from bureaucratic inertia.

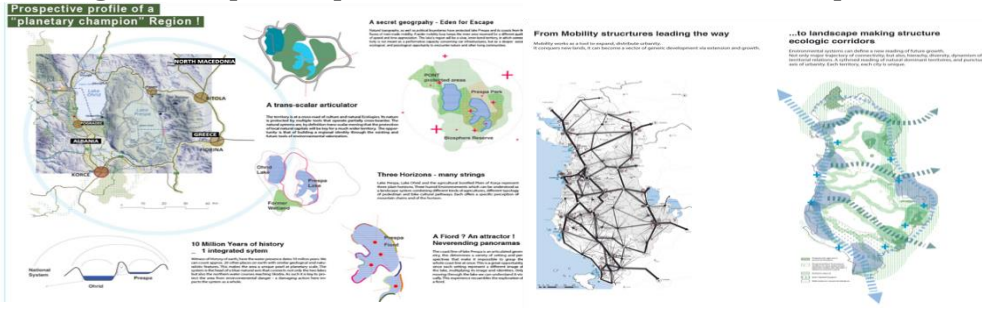
Source: Compiled by the authors. Theoretical and legal framework synthesised from the foundational texts: UNECE Water Convention (1992); European Parliament and Council Regulation (EC) No 1082/2006 (amended by Regulation (EU) No 1299/2013); and Ostrom (1990, 2010). Practitioner-adjacent implementation data adapted from Petrakos et al. (2024).

The systematic fragilities of the EGTC model become particularly evident when evaluating the benchmarks frequently cited in policy literature. Practitioner studies often treat successful transboundary frameworks like Lake Constance as ideal, stable archetypes to be emulated in the Western Balkans (Petrakos, M. et al., 2024). However, this paper notes that the cooperative success of the Lake Constance model was structurally enabled by symmetric EU integration, shared regulatory alignment, and comparable financial capitalisation across all participating states. The Prespa basin structurally lacks these baseline conditions. Because Albania and North Macedonia remain non-EU candidate nations with constrained local budgets, applying a standard EU legal vehicle without adjusting for these structural asymmetries creates an institutional paradox. This reality necessitates looking beyond successful Western models to look at case studies like ZASNET, Alpi Marittime–Mercantour, or Duero-Douro to extract flexible, adapted governance mechanisms rather than rigid templates. The evidence above suggests that formal state-centric treaties, like the UNECE Water Convention, provide non-negotiable legal principles on transboundary environmental harm, yet often struggle with local implementation due to administrative friction between signing nations. On the other hand, localised soft-governance structures, like the EGTC, provide a compelling way forward for cross-border spaces such as Prespa, allowing border municipalities to avoid the inertia of central capital and co-manage infrastructure directly. Polycentric basin organisations, as conceptualised by Ostrom (2010), bridge these scales by inserting non-governmental organisations and civic alliances into the regulatory hierarchy and thus providing an institutional voice for epistemically peripheral communities. These diverse mechanisms are fused together to form the operational basis of the projective proposals given below.

6. Projective Proposals: The Three-Country Playbook

This research dismisses the conventional regional planning approaches based on aggressive infrastructure expansion and market-led tourism clusters as a means of mapping a resilient future for the Prespa basin. Instead, it promotes an epistemic shift to a post-growth territorial logic where ecosystem robustness, care for local communities, and transboundary solidarity are the main indicators of success instead of material throughput (Savini et al., 2022).

Image 8. Prospective profiles for environmental driven cooperation



Strategic spatial playbook mapping the shift from national developmental clusters to a continuous, environment-driven transboundary cooperation framework. Schematic Profile: Ponti, Romio, Bejko, Intersecting Landscapes Workshop, Ferrara & Polis University, 2024.

Authors of this paper build on the results of Dhrami et al. (2025), which proposes a coordinated, three-country strategic playbook that moves the planning gaze from fragmented national growth nodes to seamless landscape corridors, viewing the whole lake basin as a shared transboundary common (Dhrami et al., 2025; Ostrom, 2010).

Pillar 1: Incremental Transboundary Governance (Procedural & Multi-Species Justice)

The implementation of transboundary environmental mandates along an international borderland cannot occur through top-down enforcement measures imposed without prior institutional development. This is a recurring problem in earlier regional studies where top-down enforcement mechanism overlays do not work because of structural asymmetries and complete disregard for local operational capabilities (Bejko, 2025; Schoon, 2013). Drawing on the institutional gaps identified in Section 4 and the soft-governance benefits of the EGTC and polycentric approaches outlined in Section 5, we propose an **incremental operational pathway** that grounds multi-species care in concrete political-economic trade-offs.

However, an institutional paradox remains evident when evaluating the deployment of the instrument of the European Grouping of Territorial Cooperation (EGTC) across the external perimeter of the European Union. Because the formal establishment of an EGTC is legally grounded in EU community law and requires standard ratification protocols, its implementation is frequently blocked by the asymmetric administrative capacities and central ministry frictions of non-EU candidate states like Albania and North Macedonia. Rather than recommending a rigid legal archetype to be copy-pasted across this uneven frontier, we suggest an '**EGTC-adapted framework**'*—a hybrid, soft-governance cross-border body*. This model takes advantage of the decentralised spirit of the EGTC, enabling border municipalities to directly engage and co-manage infrastructure without waiting for the full alignment at the state level or for central government inertia to be overcome. Crucially, as highlighted in the regional policy memorandum by Petrakos, M. et al. (2024), a fraction of this institutional blueprint is already being actively pursued by local practitioners in the basin who recognise that decentralised legal vehicles are the only viable mechanism to bypass ministerial bottlenecks and unlock funding directly for border municipalities.

It is important to be precise about what 'EGTC-adapted' can and cannot mean in legal terms. Regulation (EC) No 1082/2006, as amended by Regulation (EU) No 1299/2013, grounds full EGTC membership in EU law and, outside a small set of derogations agreed bilaterally with the European Commission, restricts voting membership to bodies governed by the law of an EU member state or an accession-track state with a specific enabling agreement; Albania and North Macedonia, as non-member candidate states, cannot simply opt into a standard EGTC structure. In practice, the nearest existing legal vehicles operating across this exact frontier are the Interreg-IPA cross-border cooperation (CBC) programmes, which already fund joint calls, small grants, and technical cooperation between Greek and Western Balkan border municipalities but stop short of conferring the EGTC's single-legal-personality status and its capacity to directly hold budgets, employ staff, and sign

infrastructure contracts across the border. The 'EGTC-adapted framework' proposed here should therefore be read as a policy aspiration rather than an available legal instrument: it would require either a bespoke intergovernmental treaty modelled on the Prespa Park Agreement itself, or a negotiated extension of Interreg-IPA CBC governance rights, neither of which currently exists in the acquis. We flag this gap explicitly so that the proposal is read as an agenda for institutional design and diplomatic negotiation, not as a ready-to-implement legal blueprint.

Instead of demanding an immediate, politically unfeasible surrender of national statutory sovereignty along the EU's external frontier, the three national governments must formally upgrade the **Prespa Park Management Committee (PPMC)**. This upgrade should not follow the rigid, standard EGTC archetype optimised for fully integrated EU zones like Lake Constance. Instead, building upon the practitioner momentum highlighted by Petrakos, M. et al. (2024), we propose an **'EGTC-adapted framework'**, a hybrid public entity designed to navigate the uneven legal realities of the EU-Western Balkan frontier while securing funding directly to the local municipalities. This institutional upgrading makes the PPMC an active trilateral public coordination body, funded by shared cross-border agreements. **The Transboundary Water Council** will have direct authority to implement synchronised monitoring stations for the management of the hydrological continuum as a single non-standard geography.

Crucially, this new framework avoids the problems of centralised bureaucratic inertia through the incorporation of a polycentric structure as theorised by Ostrom (2010). To bridge the operational gap between high-level diplomatic mandates and local realities, the proposed Transboundary Water Council must formally institutionalise civil society networks, namely the PrespaNet alliance, as an advisory and monitoring tier. Such bottom-up civic actors are embedded into the governance hierarchy with a permanent, legally recognised seat, transforming the framework from volatile, donor-dependent volunteerism into a durable polycentric governance framework. This architecture makes ecological monitoring a transparent, multi-scalar practice that directly holds the trilateral public coordination body accountable to local community inputs. Furthermore, such a structure establishes a baseline of participatory planning, marking a significant advancement from mere consultation.

Finally, the recommendations of this council on water caps are intended to address the historical injustices of distribution documented by Bejko (2025). The playbook provides for a **Transboundary Buffering Mechanism** with regulatory caps first imposed on intensive agricultural water abstractions in the commercial North Macedonian (Resen) and Greek sectors. A portion of those agricultural revenues and EU cohesion funds can then be channelled into a regional ecological fund to support local farming families. Crucially, this fund will not operate as a passive cash handout. Instead, it can finance a structured **agricultural production restructuring programme** built explicitly around the everyday survival and livelihood shifts of smallholders—focusing primarily on the vulnerable family farms of Pustec while remaining adaptable to other marginalised smallholders in the basin. Distributed through verified de minimis state-aid rules, capital can be awarded directly to families who prove they are enacting eco-friendly changes on their land. This framework balances accountability with real-world care, conditioning all

financial aid on clear environmental goals, strict deadlines, and accessible on-the-ground technical support. By investing directly in the capacity of families to adapt, this mechanism can help to lift local production limits, ensuring that broader ecological goals for the lake are never achieved at the expense of human survival in the borderlands.

Pillar 2: Framework for Relational Translation (Distributional and Epistemic Justice)

Pillar 2 builds directly on the results of Dhrami et al., 2025 socio-spatial and land-use analysis of the basin, which showed how conventional, infrastructure-heavy models of connectivity further fragment the landscape and concentrate resource capture at dominant nodes. Public investment should shift from carbon-intensive road infrastructure to a distributed network of low-impact facilities to distribute territorial capital more equitably across the non-standard geography (Dhrami et al., 2025). We propose the development of decentralised transboundary research centres, slow nature-based mobility trails, and cooperative eco-agricultural branding frameworks.

Image 9. Strategic interventions



Visionary design sketches illustrating the integration of context-rooted agroforestry facilities, light observation decks, and pedestrian paths along the lake ecotone. Sketches: Romio, Intersecting Landscapes Workshop, Ferrara & Polis University, 2024.

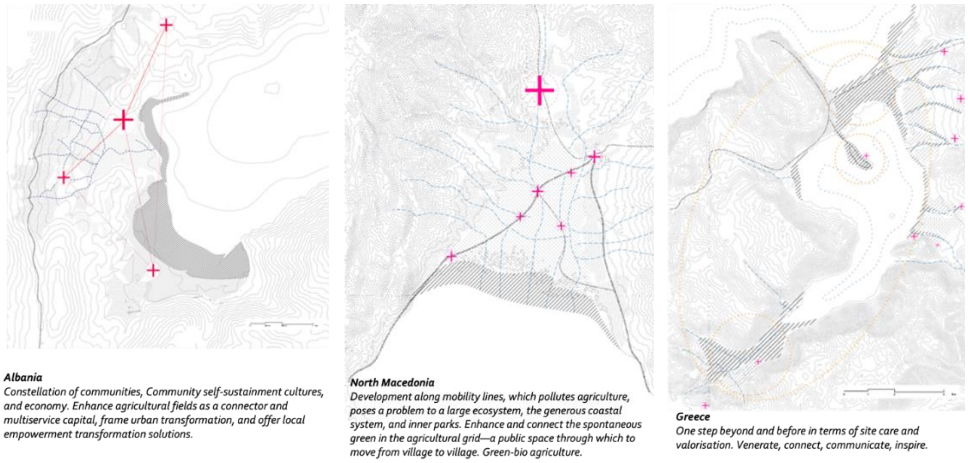
Fundamentally, this pillar resolves the scalability trap by functioning as a **Framework for Relational Translation.** It recognises the profound political-economic asymmetries and path dependencies among the three countries: the low-impact, village-scale subsistence layout of the Albanian sector cannot simply be copied and pasted into the intensive commercial orchards of North Macedonia or the highly capitalised, subsidised agricultural systems of Greece. Rather than imposing geometric uniformity, the proposal carries the metabolic principles of landscape curatorship across borders. (Dhrami et al., 2025) It encourages highly capitalised

commercial sectors to progressively embed nature-based solutions such as biodiverse hedgerow buffers, passive filtration swales, and agroforestry transitions in order to attain the environmental baseline of the shared ecosystem, thus recasting agricultural landscapes from point sources of degradation to active mechanisms of care.

Pillar 3: Country-specific sequences for Cohesion

The playbook develops national actions based on the principle of complementarity, bringing together the different national capabilities into a common regional trajectory. The distinct sequences proposed for each nation are explicitly bound to a shared transboundary trajectory: a collective regional transition toward zero-runoff regenerative agro-ecology that treats the entire basin as a single non-standard geographic entity. Recognising that local path dependencies prevent an overnight uniform policy shift, this playbook maps out sequential, country-specific pathways designed to systematically converge over time.

Image 10. Three national sequences and agendas



Comparative structural mapping of the country-specific spatial strategies and target zones across Albania, North Macedonia, and Greece. Three sequences, three agendas: Sketches: Ponti, Intersecting Landscapes Workshop, Ferrara & Polis University, 2024.

- **Albania (Dismantling Epistemic Peripherality):** Focuses on village-scale autonomy, landscape-led development, and community self-sufficiency. It reframes the agricultural plain as a multi-service resource that stabilises urban limits while directly empowering the minority community of Pustec through localised cultural and material support. Grounded in this localised self-reliance, the sequence initiates an immediate shift away from chemical dependencies by leveraging traditional, low-impact polyculture knowledge, establishing Pustec as the baseline incubator for the basin's broader chemical-free agrarian transition.

- **North Macedonia (Ecological Repair & Spatial Rewiring):** Focuses on mitigating the impacts of intensive commercial farming. While the ultimate

transboundary goal mandates a total, coordinated conversion to certified organic cultivation across all three countries, the immediate sequence uses natural infrastructure as a transitional stepping stone. It transforms rigid agricultural grids into green public networks by embedding biodiverse hedgerows, windbreaks, and infiltration swales to naturally filter chemical runoffs before they reach the lake. This physical rewiring serves as an essential regulatory buffer, buying vital metabolic time for local cooperatives to systematically restructure their supply chains and phase out synthetic pesticides.

- **Greece (Cultural Leadership & Data Solidarity):** Leverages its relative institutional alignment and advanced conservation monitoring and direct access to EU environmental funds to host transboundary eco-initiatives. Rather than positioning the Greek state apparatus as a flawless planning model, this sequence specifically taps into its structural access to targeted EU green transition grants. It establishes open-access, shared databases and protocols to harmonise regional environmental data across neighbouring EU candidate nations. By actively syncing monitoring tools with its cross-border neighbours, this sequence builds institutional solidarity while progressively steering its highly specialised bean farmers away from commercial monoculture and toward fully organic, catchment-safe production standards.

7. The Pustec Pilot Modules: An Open-Ended Toolkit for Adaptive Landscape Infrastructure

The localised design hypothesis translates this macro-regional playbook into an operational spatial prototype centred on the Pustec Municipality of Albania. Rather than functioning as an isolated master plan, this section represents a collaborative research-by-design contribution developed through the joint international workshop organised by the University of Ferrara and Polis University (Dhrami et al., 2025). Combining field-base investigations, vernacular analysis, and critical mapping, this joint academic effort advances the **agro-field as a multi-service civic and ecological infrastructure**, systematically addressing the relational isolation of the Albanian sector.

Image 11. Focus on Pustec – a toolkit for action



Detailed landscape plan and axonometric sections showing the multi-service agro-field module in Pustec, integrating knowledge hubs, buffer ecotones, and passive water management. Interpretation: Bejko, Ponti, Romio; Sketches: Ponti, Intersecting Landscapes Workshop, Ferrara & Polis University, 2024.

Importantly, the design components detailed below must be understood as illustrative examples within an open, adaptive framework. They do not comprise an exhaustive or rigid master template; rather, there remains extensive programmatic space for additional, alternative interventions that could be foreseen as complementary, or even necessary, to address the evolving socio-ecological needs of the Pustec community. Fusing spatial design with social care, the prototype establishes its baseline through three core, interconnected design components adapted from the collaborative findings of the Ferrara–POLIS framework (Dhrami et al., 2025).

7.1. Knowledge Co-Production Landscapes & Local Empowerment Hubs

To combat demographic out-migration and economic stagnation, the agro-field integrates small-scale field laboratories, seed-conservation greenhouses, and outdoor seasonal classrooms. However, these facilities are structurally designed as **Knowledge Co-Production Hubs** to insulate this prototype from the threat of academic colonialism or green gentrification, where an influx of elite international researchers imports top-down scientific methods that reproduces epistemic peripherality.

Dhrami et al.'s (2025) contribution proposes to use participatory action research methods to run university satellite centres and field stations. Visiting scientists, landscape architects, and ecologists will not see Pustec as a passive open-air laboratory (Koolhaas, 2020). For this project to benefit the local community and not simply become a playground for outside academics, the research centres must treat local people as equal partners. Visiting scientists, architects, and experts cannot use Pustec as an outdoor laboratory to study the environment and leave. Instead, the traditional fishers, village elders, and local farmers will have a real say in the research and a voice in how it is disseminated. Local, intergenerational knowledge about weather, fish cycles, and traditional farming will be carefully documented and credited to the villagers themselves. The prototype turns Pustec into a place of shared learning where residents are the real custodians of the landscape by giving local intelligence a formal voice and ensuring that community members are fairly compensated for their time and knowledge.

7.2 Passive Water Management Architecture

Visible, nature-based water purification infrastructures are embedded in the spatial arrangement of the fields. The ecotone alongside the lake combines roof rainwater harvesting, distributed infiltration swales, and permeable tracks together with biological reedbed polishing zones. Rather than seeking to completely replace the long-term necessity of centralised, state-led public water supply and sanitation networks, these decentralised features function as vital, localised supplementary infrastructures. These open landscape modules are designed to manage two distinct hydrological streams. Primarily, they function as landscape-scale metabolic filters that intercept, slow, and naturally polish agricultural surface runoff and stormwater—preventing harmful pesticide and fertiliser residues from draining directly into the lake's sensitive littoral zones. Secondarily, the prototype captures

and recycles domestic greywater at a micro-communal scale. Acknowledging the strict public health and agronomic hazards associated with greywater reuse, including high sodium concentrations and pathogen loads, the use of this recycled stream is strictly regulated. The layout explicitly isolates treated greywater for the irrigation of non-food agroforestry belts, woody biomass, and above-ground heritage crops. It strictly prohibits application to underground root crops (such as potatoes or carrots) to prevent soil degradation and biological contamination. By balancing ecological runoff treatment with safely contained domestic water recycling, this architecture builds localised climate resilience and micro-autonomy without placing an undue financial or structural burden on Pustec's peripheral smallholders.

7.3 Resilient Productive Planting Alleys

Diversified agroforestry strips replace monoculture cropping system. The alleys of traditional heritage grains, legumes, and local medicinal plants are designed to improve soil vitality and provide a diversified income source to the subsistence farmers. Crucially, these planting matrices are selected to support local wild bee and insect pollinator populations, reinforcing the biocentric cohabitation of the basin. Inland forest patches are directly connected to riparian wetland zones through continuous biodiversity corridors and micro-orchard belts. This produces a continuous multi-species infrastructure that preserves pollinator habitats while functioning as slow mobility corridors for pedestrian movement between villages, creating a localised web of everyday encounter and environmental stewardship grounded in organic landscape immersion (Ingold, 2011).

Rather than stopping abruptly at administrative lines, this network is conceptually projected as a transboundary slow-mobility infrastructure. In the long-term planning horizon, these local paths are designed to weave across national borders, linking the villages of Pustec with adjacent smallholder settlements in Greece and North Macedonia. While current external EU border regulations require the integration of simplified local checkpoints along these green pathways, this network serves as an active territorial framework that anticipates future European integration. Following the eventual EU accession of the Western Balkan candidate states, these checkpoints can be seamlessly phased out, leaving a unified, cross-border web of pedestrian trade and shared transboundary care.

8. Conclusion: Restoring the Transboundary Commons

The management of the Prespa Lake basin, one of Europe’s oldest and ecologically most significant lake systems, requires a complete departure from the traditional regional planning paradigms driven by short-term macroeconomic growth or isolated national optimisation. As analysed in this study, the current project-based, donor-dependent approaches are structurally incapable of preventing the ecological collapse of the lake or overcoming the deep socio-spatial inequalities created by the EU border divide.

This paper demonstrates how the environmental crisis in Prespa is explicitly related to institutional and recognitional failures. It shifts the theoretical gaze to non-

standard geographies, epistemic peripherality, and More-Than-Human spatial justice. Hard regulatory walls around the lake cannot protect it, leaving its human and non-human communities relationally isolated, friction-filled, and minoritised.

The strategic playbook and the Pustec multi-service prototype put into practice an alternative territorial logic where the landscape itself becomes civic and ecological infrastructure. In this framework, regional fragmentation is replaced with structural complementarity (Magnaghi, 2010, 2014) through a transboundary buffering mechanism that addresses the structural frictions between multi-species mandates and local livelihoods and the explicit co-production of knowledge that insulates local communities from academic gentrification. Planners, state bodies, and international organisations must explicitly incorporate these principles of incremental governance, multi-species care, and localised epistemic recognition in policy and spatial practice. The future of Prespa is clear: to continue a path of uncoordinated, top-down neglect that cements its status as an exploited frontier or to rebuild it as a pioneering, place-based model of a just, regenerative, and transboundary green transition (Bulkeley et al., 2014).

9. References

Abram, D. (1996). *The spell of the sensuous: Perception and Language in a More-Than-Human world.* Vintage Books.

Agricultural Extension Agency – Resen. (2005). Lake Prespa – transboundary diagnostic analysis. Global Environment Facility (GEF) / IW:LEARN

Bejko, A. (2025). Spatial Justice and Equitable Development in the Prespa Lake Borderland: A Transboundary Analysis. *Scientific Journal of the Observatory of Mediterranean Basin*, 10, 84-95.

Bounas, A., Catsadorakis, G., Koutseri, I., Nikolaou, H., Nicolas, Delphine., Malakou, M., & Crivelli, A. J. (2021). Temporal trends and determinants of fish biomass in two contrasting natural lake systems: insights from a spring long-term monitoring scheme. *Knowledge & Management of Aquatic Ecosystems*, (28), 1–14. https://doi.org/10.1051/kmae/2021027

Bulkeley, H., Andonova, L., Betsill, M., Compagnon, D., Hale, T., Hoffmann, M., Newell, P., Paterson, M., Roger, C., & VanDeveer, S. (2014). *Transnational climate change governance*. Cambridge University Press.

Cash, D. W., Adger, W. N., Berkes, F., Garden, P., Lebel, L., Olsson, P., Pritchard, L., & Young, O. (2006). Scale and cross-scale dynamics: Governance and information in a multilevel world. *Ecology and Society*, *11*(2), 8. Retrieved from http://www.ecologyandsociety.org/vol11/iss2/art8/

Dhrami, K., delli Ponti, A., Bejko, A., & Romio, F. (2025). Intersecting Landscapes: New Spatial Visions for the Cross-Border Region of the Prespa Lakes. In *Intersecting Landscapes. Finding New Spatial Visions for the Cross-Border Region of Prespa Lakes and the case of Pustec Municipality–Albania*. (pp. 58-67). POLIS PRESS.

ESPON. (2026). Territorial governance of non-standard geographies (Final Report). Retrieved from https://www.espon.eu/sites/default/files/2026-01/nostageo_final_report.pdf

European Commission. (2024). At a glance: Greece's CAP strategic plan (2023–2027). Directorate-General for Agriculture and Rural Development

European Parliament and Council of the European Union. (2006). Regulation (EC) No 1082/2006 of the European Parliament and of the Council of 5 July 2006 on a European Grouping of Territorial Cooperation (EGTC). Official Journal of the European Union, L 210, 19–24.

European Parliament and Council of the European Union. (2013). Regulation (EU) No 1299/2013 of the European Parliament and of the Council of 17 December 2013 amending Regulation (EC) No 1082/2006 on a European Grouping of Territorial Cooperation (EGTC) as regards the clarification, simplification and improvement of the establishment and functioning of such groupings. Official Journal of the European Union, L 347, 303–319.

Fieuw, W., Foth, A., & Caldwell, P. (2022). Towards a More-Than-Human approach to smart and sustainable urban development: Designing for multispecies justice. *Sustainability*, 14(2), 948. https://doi.org/10.3390/su14020948

Fraser, N. (2009). *Scales of Justice: Reimagining Political Space in a Globalizing World*. Columbia University Press.

Grazhdani, D. (2018). Assessment of issues and opportunities for sustainable social economic development in the Albanian part of Prespa Park. *Albanian Journal of Agricultural Sciences*, 17(2), 112–124.

Haraway, D. (2003). *The companion species manifesto: Dogs, people, and significant otherness*. Prickly Paradigm Press.

Haraway, D. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press. https://doi.org/10.1215/9780822373780

Harvey, D. (1973). *Social justice and the city*. Edward Arnold.

Hilton, L., & Pesarini, A. (2026). Introducing epistemic peripheries. In Routledge (Eds.), *Routledge Handbook of Peripheries in European Studies* (pp. 337-350). Routledge.

Ingold, T. (2011). *Being alive: Essays on movement, knowledge and description*. Routledge.

Jasanoff, S., & Kim, S.-H. (Eds.). (2015). *Dreamscapes of modernity: Sociotechnical imaginaries and the fabrication of power*. University of Chicago Press.

Koolhaas, R., & AMO. (2020). Countryside: A Report. Taschen.

Magnaghi, A. (2010). *Il progetto locale: Verso la coscienza di luogo*. Bollati Boringhieri.

Magnaghi, A. (2014). *La biorégion urbaine*. Éditions Eterotopia.

Matzinger, A., Jordanoski, M., Veljanoska-Sarafiloska, E., Sturm, M., Müller, B., & Wüest, A. (2006). Isotope modeling of water pathways and chemical gradients in ancient tectonic lakes: Prespa and Ohrid. *Springer Hydrogeology*.

Ostrom, E. (1990). Governing the commons: The evolution of institutions for collective action. Cambridge University Press

Ostrom, E. (2010). Beyond markets and states: Polycentric governance of complex economic systems. *American Economic Review*, *100*(3), 641–672. https://doi.org/10.1257/aer.100.3.641

Ostrom, E., & Hess, C. (Eds.). (2007). *Understanding knowledge as a commons: From theory to practice*. MIT Press.

Petrakos, M., Micalevski, J., Balaouri, O., & Kutrolli, A. (2024). Crossing borders, building trust: Institutional vehicles for transboundary governance in the Prespa Lakes basin (Policy Memorandum). Municipality of Prespa. *Scientific Journal of the Observatory of Mediterranean Basin*, 10, 24-31.

Puig de la Bellacasa, M. (2017). *Matters of care: Speculative ethics in more than human worlds*. University of Minnesota Press.

Ramsar Convention on Wetlands. (1971). *International treaty for the conservation and sustainable use of wetlands*. Ramsar.

Savini, F., Ferreira, A., & von Schönfeld, K. (Eds.). (2022). *Post-growth planning: Cities beyond the market economy*. Routledge.

Schoon, M. (2013). Governance in transboundary conservation: How institutional structure and path dependence matter. *Conservation and Society*, 11(4), 420–428. https://doi.org/10.4103/0972-4923.125752

Society for the Protection of Prespa (SPP). (2015). Strategic planning for funding opportunities through the Common Agricultural Policy (CAP) for Prespa. SPP / Piraeus Bank Group.

Soja, E. W. (1989). *Postmodern geographies: The reassertion of space in critical social theory*. Verso.

Soja, E. W. (2010). *Seeking spatial justice*. University of Minnesota Press.

Topaloglou, L. (2020). Spatial (in)justice and place-based strategies in innovation ecosystems: The case of the Alexander Innovation Zone in Thessaloniki. *Bulletin of Geography. Socio-economic Series*, 49(49), 81–92. https://doi.org/10.2478/bog-2020-0025.

Topaloglou, L., & Petrakos, G. (2008). Interaction, perceptions and policies in the boundaries of European Union: The case of the northern Greek cross-border zone. *Economic Alternatives*, (1), 65–79.

Trajkovski, D., & Apostolova, N. (2024). The catastrophic water loss of ancient Lake Prespa: A chronicle of a death foretold. *Hydrology*, *11*(12), 199. https://doi.org/10.3390/hydrology11120199

United Nations Development Programme (UNDP). (2018). Restoring the health of Lake Prespa. *United Nations Development Programme Eurasia*.

UNDP. (2006). *Integrated ecosystem management in the Prespa Lakes basin of Albania, North Macedonia, and Greece* (GEF Project ID 1537). United Nations Development Programme.

UNECE. (1992). Convention on the Protection and Use of Transboundary Watercourses and International Lakes. Helsinki, 17 March 1992. *United Nations Treaty Series*, vol. 1936, p. 269.

UNESCO. (2014). *Ohrid-Prespa transboundary biosphere reserve*. UNESCO Ecological Sciences for Sustainable Development.

Verstijnen, Y. J. M., Maliaka, V., Catsadorakis, G., Lürling, M., & Smolders, A. J. P. (2021). Colonial nesting waterbirds as vectors of nutrients to Lake Lesser Prespa (Greece). *Inland Waters*, 11(2), 191–207. https://doi.org/10.1080/20442041.2020.1869491

Whatmore, S. (2002). *Hybrid geographies: Natures cultures spaces*. Sage Academic Books.

Acknowledgement:

Funded by the European Union, under the GA101136834 - CROSS-REIS. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them. This work is the result of research based on the obligations under the Agreement in 2024 (No. 451-03-65/2024-03), concluded between Ministry of Science, Technological Development and Innovation of the Republic of Serbia and Faculty of Economics, University of Niš.

PLANIRANJE IZVAN ADMINISTRATIVNIH GRANICA: NESTANDARDNE GEOGRAFSKE CELINE I PREKOGRANIČKA ZAJEDNIČKA DOBRA U SLIVU PRESPANSKOG JEZERA

Apstrakt: *Region Prespanskih jezera, koji dele Albanija, Grčka i Severna Makedonija, predstavlja područje izuzetnog ekološkog značaja i istorijski oblikovan prekogranični prostor koji prevazilazi okvire standardnih, linearnih paradigmi administrativnog planiranja zasnovanih na ekonomskom rastu. Nalazeći se na preseku direktiva Evropske unije u oblasti zaštite životne sredine, nacionalnih politika teritorijalne kohezije i procesa proširenja EU na Zapadni Balkan, ovaj region i dalje karakterišu ekonomska ranjivost i institucionalna fragmentiranost. U radu se područje Prespanskih jezera koristi kao svojevrsna istraživačka laboratorija za analizu međusobnog delovanja politika zelene tranzicije koje se sprovode pristupom odozgo nadole, konfiguracije državnih granica i svakodnevne stvarnosti stanovništva perifernih zajednica i osetljivih ekosistema. Rad odstupa od uobičajenih evrocentričnih pristupa regionalnom planiranju i polazi od uzajamnog oblikovanja prostora i društva, kombinujući višedimenzionalno razumevanje prostorne pravde, koje obuhvata distributivnu, proceduralnu i dimenziju priznavanja, sa tri novije teorijske perspektive: nestandardnim geografskim celinama (ESPON, 2021–2026), epistemološkom perifernošću (Hilton & Pesarini, 2026) i prostornom pravdom koja obuhvata i neljudske oblike života (Fieuw et al., 2022). U okviru ovako postavljenog analitičkog pristupa, rad istražuje kontinuiranu degradaciju životne sredine i produbljivanje društvenih podela u slivu Prespanskih jezera. Rezultati ukazuju na to da dosadašnji modeli upravljanja, zasnovani prvenstveno na državnim granicama, nisu uspeli da spreče degradaciju životne sredine niti da obezbede pravične uslove za lokalne zajednice. Empirijsko istraživanje zasniva se na detaljnoj teritorijalnoj analizi, kartiranju načina korišćenja zemljišta i analizi mehanizama regionalne saradnje u okviru Prespanskog parka, koji obuhvata teritorije sve tri države. Nalazi istraživanja otkrivaju izražene nejednakosti u raspodeli resursa i razvojnih podsticaja između tri nacionalna dela ovog područja, ukazujući na to da su znanja i iskustva lokalnih poljoprivrednika koji obrađuju manje posede sistematski zanemarivana ili potiskivana usled centralizovanih državnih politika. Iako ove strukturne i ekološke neravnoteže pogađaju zajednice širom sliva, posebno u područjima u kojima intenzivni komercijalni oblici poljoprivredne proizvodnje dolaze u sukob sa režimima zaštite prirode, njihove posledice najizraženije su u marginalizovanoj albanskoj opštini Pustec. U cilju prevazilaženja navedenih problema, rad predlaže dugoročno orijentisanu strategiju zasnovanu na integralnom sagledavanju predela, koja povezuje prekogranične ekološke koristi sa fleksibilnim pristupom regionalnom planiranju. Predloženi okvir redefiniše tradicionalno poljoprivredno zemljište kao prostor koji istovremeno može pružati višestruke koristi lokalnim zajednicama i životnoj sredini. Posebna pažnja posvećena je protivrečnostima između obezbeđivanja egzistencije lokalnog stanovništva i zaštite životne sredine, neravnomernoj*

raspodeli moći duž granica Evropske unije, kao i riziku da istraživači izvan lokalnih zajednica preuzmu dominantnu ulogu u raspravama o njihovom razvoju. Istovremeno, razmatraju se mogućnosti uspostavljanja holističkog pristupa zajedničkom životu različitih vrsta. Zaključuje se da pravična i održiva tranzicija u ekološki osetljivim pograničnim područjima zahteva napuštanje pristupa zasnovanog na ekonomskom rastu po svaku cenu i usmeravanje ka novim modelima zajedničkog stvaranja i razmene znanja, prekogranične saradnje i odgovornog odnosa prema svim oblicima života.

Ključne reči: : *nestandardne geografske celine, epistemološka perifernost, pravda koja obuhvata i neljudske oblike života, prostorna pravda, prekogranično upravljanje, Prespanska jezera, Zapadni Balkan, regenerativni razvoj.*