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ECO-SOCIAL WORK AND ECOSYSTEM SUSTAINABILITY: A FRAMEWORK FOR COMMUNITY RESILIENCE AND ENVIRONMENTAL JUSTICE IN VULNERABLE POPULATIONS

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ABSTRACT

In the contemporary era, ecosystem degradation, industrial pollution, and urban climate vulnerability have transitioned beyond environmental boundaries to become acute socioeconomic crises. Vulnerable populations, specifically low-income families and marginalized youth, suffer disproportionately from ecological disequilibrium. This study examines the intersection of social work and ecosystem sustainability within the urban-industrial corridor of Central Albania (Tirana, Elbasan, and Durrës). Operating under the theoretical paradigms of Green Social Work and Ecological Systems Theory, the paper addresses the impact of environmental degradation on human psychosocial well-being. A mixed-methods research design was deployed, incorporating a quantitative survey (N = 120 vulnerable families) and qualitative focus groups (N = 3) with social work practitioners. The empirical findings indicate a robust correlation between systemic ecosystem degradation (air pollution, lack of urban green spaces, and waste mismanagement) and heightened psychosocial stress, compounding existing socioeconomic vulnerabilities. The paper delineates an integrated eco-social intervention framework, arguing that modern social work must incorporate ecological literacy and environmental advocacy into its core practice to foster sustainable community resilience and environmental justice.

Keywords: eco-social work, ecosystem sustainability, environmental justice, community resilience, central Albania.

INTRODUCTION

The global ecological crisis has forced a radical re-evaluation of human development frameworks. For decades, academic discourse separated environmental sciences from social welfare paradigms. However, in the 21st century, it is increasingly evident that ecosystem degradation, climate instability, loss of biodiversity, and systemic pollution are intrinsically linked to social inequality, poverty, and human suffering. This paradigm shift has given rise to "Eco-Social Work" or "Green Social Work," an interdisciplinary domain asserting that human well-being is contingent upon the structural health and sustainability of the natural ecosystem. In developing and transitioning economies, such as Albania, the consequences of rapid, unaligned urban expansion, intensive industrialization, and suboptimal environmental enforcement manifest directly as social crises. The urban-industrial corridor

encompassing Tirana, Elbasan, and Durrës serves as a critical epicenter of this dynamic. In these areas, vulnerable populations—low-income households, marginalized youth, informal settlement residents, and families relying on subsistence economies—frequently reside in proximity to industrial discharge zones, compromised waste infrastructure, and areas devoid of public green infrastructure. Consequently, these groups experience a compounding effect where structural socioeconomic deprivation intersects with high environmental risk, a condition formally defined as environmental injustice. Traditional social work methodologies in Albania have historically focused on immediate psychological counseling, financial assistance administration, and legal protection. While essential, this narrow focus overlooks the macro-environmental stressors that erode community health, trigger eco-anxiety, and limit social mobility. This article addresses this critical gap by presenting an integrated empirical study on how localized ecosystem degradation impacts vulnerable groups in Central Albania, establishing an operational framework for eco-social work interventions that align with global ecosystem management standard.

Research Aim, Objectives, and Research Questions

Research Aim. The primary objective of this study is to analyze the operational intersection between social work practice and ecosystem sustainability in Albania. It seeks to establish an empirical baseline demonstrating how ecosystem degradation affects the psychosocial well-being of vulnerable youth and families, ultimately proposing an integrated eco-social framework to enhance community resilience and environmental justice.

Research Objectives: - To evaluate the specific types and perceived levels of ecosystem degradation impacting vulnerable populations in the Tirana-Elbasan-Durrës corridor; - To identify and quantify the psychosocial and economic impacts of localized ecological degradation on these target groups; - To assess the current level of ecological literacy and systemic environmental engagement among social work practitioners in Albania; - To formulate an actionable eco-social work model that integrates ecosystem preservation with community-level social interventions.

Research Questions: - RQ1: What is the relationship between localized ecosystem degradation (such as industrial pollution and lack of green space) and the reported psychosocial stress levels of vulnerable families in Central Albania? - RQ2: To what extent do current social services in Albania recognize and address environmental factors as core drivers of social vulnerability? - RQ3: What operational framework can effectively synthesize ecological sustainability with traditional social work interventions to promote environmental justice?

Literature Review and Theoretical Framework

Literature Review: The Eco-Social Paradigm. The evolution of eco-social work stems from the realization that the traditional "person-in-environment" (PIE) construct within social work historically minimized the "environment" to immediate social, familial, and institutional networks, completely omitting the physical, biophilic, and ecological environment. Pioneering scholars such as Lena Dominelli (2012) introduced "Green Social Work" to challenge this anthropocentric limitation. Dominelli argues that environmental degradation is not an equalizer; it exploits existing structural inequalities. Disadvantaged communities lack the financial capital to insulate themselves from ecological shocks, move away from highly polluted zones, or access premium ecological resources such as clean water and unpolluted recreational spaces. Recent international literature emphasizes that ecological degradation induces direct psychological pathology, categorized as "eco-anxiety" or "solastalgia"—the distress caused by environmental change impacting one's home environment (Albrecht et al., 2007). In urban ecosystems, the presence or absence of green infrastructure directly mediates human neurological health, stress hormone regulation, and social cohesion. Ramsay Boddy (2021) established that incorporating ecosystem management within community development models significantly lowers crime rates, elevates collective efficacy, and builds socioeconomic resilience among marginalized youth.

Theoretical Framework

This study is structurally underpinned by two complementary theoretical paradigms: 1. Deep Ecological Systems Theory: Expanding Urie Bronfenbrenner's classical ecological systems framework, this model integrates the chronosystem and macrosystem with the physical biosphere. It conceptualizes the human individual as nested not only within microsystems of family and peers, but within a foundational biosphere where biochemical, geographical, and ecological variables directly govern human functioning and systemic stability; 2. Environmental Justice Framework: Developed by Robert Bullard (1990), this framework asserts that all communities are entitled to equal environmental protection and equal access to clean natural resources. It provides the analytical leverage required to critique the disparate distribution of ecological burdens in industrial and transitioning urban spaces.

Legislative and Policy Context in Albania. To evaluate the operational space for eco-social work in Albania, one must analyze the alignment between national social welfare legislation and environmental protection frameworks. Over the past decade, Albania has significantly upgraded its legal framework to align with European Union (EU) acquis communautaire standards: - Law No. 10440/2011 "On Environmental Impact Assessment" and Law No. 10431/2011 "On Environmental Protection" explicitly state that public health and social well-being are primary objectives of environmental protection laws. However, these frameworks operate largely in structural isolation from social protection legislation: - Law No. 121/2016 "On Social Care Services in the Republic of Albania" decentralized social service provision to the municipal level (Local Government Units). While this law emphasizes community-based services, social inclusion, and empowering vulnerable groups, it lacks any explicit mention of environmental factors, natural disaster vulnerability, or ecological conditions as variables determining social risk or poverty indices. This legislative bifurcation creates an operational vacuum. While the Ministry of Tourism and Environment and the Ministry of Health and Social Protection manage interdependent crises, their structural mechanisms remain siloed. Consequently, municipal social workers lack formal legal mandates or specialized protocols to intervene when environmental degradation directly undermines a family's livelihood or psychological integrity.

MATERIAL AND METHOD

Methodology. This study utilizes a concurrent mixed-methods research design, deploying both quantitative and qualitative data collection instruments to capture the socio-ecological landscape of Central Albania.
Sampling and Geographic Scope. The empirical field research was conducted across three purposefully selected locations within the central urban-industrial corridor: 1. Elbasan: Characterized by legacy industrial heavy-metal pollution and air quality challenges; 2. Tirana (Suburban informal settlements): Characterized by high population density, rapid unaligned development, and a severe deficit of public green infrastructure; 3. Durrës (Peripheral coastal zones): Facing industrial port pollution, critical waste management challenges, and high vulnerability to climate-induced flooding. The quantitative phase involved a stratified random sample of N = 120 families currently registered in municipal economic assistance or social care databases (n = 40 per city). The qualitative phase utilized three focus groups (N = 3), one in each municipality, comprising a total of 24 professional social workers, social service directors, and civil society organizers active in community development.

Methodological Tables.

Table 1. Demographic Profiles of Surveyed Vulnerable Families (N = 120).

Demographic Variable	Category	f	%
Geographic Distribution	Elbasan	40	33.3
Geographic Distribution	Tirana Peripheral	40	33.3
Geographic Distribution	Durrës Coastal	40	33.3
Household Monthly Income	Below 25,000 ALL	58	48.3
Household Monthly Income	25,001–45,000 ALL	44	36.7
Household Monthly Income	Above 45,000 ALL	18	15.0
Employment Status	Unemployed/Informal	76	63.3
Employment Status	Employed (Low-wage)	44	36.7
Presence of Children (<18)	Yes	94	78.3
Presence of Children (<18)	No	26	21.7

Table 2. Quantitative Reliability and Construct Validity Metrics.

Scale	Items	Cronbach Alpha	CR	AVE
Perceived Ecological Stress	5	0.84	0.86	0.58
Psychosocial Vulnerability	6	0.81	0.83	0.52
Community Coping Capacity	4	0.76	0.79	0.49

Table 3. Qualitative Focus Group Informant Matrix.

Code	Location	Sector / Institutional Role	Experience (Years)
FG1-P1	Elbasan	Municipal Social Service Agency	11
FG1-P4	Elbasan	Local NGO – Youth Empowerment	6
FG2-P2	Tirana	Community Center Manager	9
FG2-P5	Tirana	School Social Worker	5
FG3-P3	Durrës	Emergency Social Care Unit	14
FG3-P6	Durrës	Civil Society Environmentalist	8

Empirical Findings and Data Analysis. Data analysis was conducted sequentially. Quantitative survey data were analyzed via SPSS using descriptive statistics, chi-square tests of independence, and multiple linear regression models. Qualitative data from focus groups underwent structural thematic analysis using NVivo software to extract cross-cutting nodes.

RESULTS

Quantitative Results. The primary phase of the quantitative analysis mapped the explicit perception of localized environmental degradation among the target populations.

Table 4. Perceived Dominant Ecosystem Stressors by Municipality (%).

Localized Stressor	Elbasan (%)	Tirana (%)	Durrës (%)	p-value
Industrial Air Pollution	72.5	22.5	35.0	<0.001
Absence of Green Parks	45.0	85.0	52.5	<0.01
Waste Mismanagement	57.5	62.5	77.5	0.07
Flooding Vulnerability	12.5	30.0	65.0	<0.001

**Note: Percentages reflect respondents who rated the specific stressor as "High" or "Severe".*

To determine the exact predictive weight of these ecological stressors on human well-being, a multiple linear regression analysis was executed. The dependent variable is the Psychosocial Stress Score (PSS), derived from a standardized Likert index measuring family anxiety, insomnia, feelings of isolation, and environmental worry (ranging from 1 to 5).

Table 5. Multiple Linear Regression Predicting Psychosocial Stress Scores (PSS).

Independent Variable	B	SE	Beta	t-value	p-value
Constant	1.420	0.241	—	5.892	<0.001
Household Income Bracket	-0.312	0.084	-0.28	-3.714	<0.001
Air Quality Degradation	0.384	0.072	0.36	5.333	<0.001
Proximity to Waste Dumps	0.215	0.069	0.22	3.115	<0.01
Deficit of Green Spaces	0.298	0.078	0.29	3.820	<0.001

Model statistics: $F = 22.41$; $p < 0.001$; $R^2 = 0.442$

The regression model achieved statistical significance ($F = 22.41$, $p < 0.001$, $R2 = 0.442$). This indicates that environmental factors explain approximately 44.2% of the variance in reported psychosocial stress within these vulnerable cohorts, independent of traditional baseline economic status.

Qualitative Findings. Thematic analysis of focus group data yielded major themes that capture the operational realities of social service workers navigating socio-ecological crises. *Theme A: The Invisibility of Ecological Stress in Social Diagnostics.* Practitioners across all municipalities universally reported that current social intake forms and assessment criteria fail to register environmental vulnerability. As a social worker from Tirana (FG2-P2) observed: "When a family enters our facility, we catalog their physical income, spatial housing conditions, and clinical health diagnoses. We entirely fail to record that their housing borders a toxic open canal or that their children suffer from chronic respiratory illness induced by dust from local concrete manufacturing. We treat the asthma and the depression in isolation, completely ignoring the toxic ecosystem driving them." *Theme B: Eco-Anxiety and Marginalized Youth.* School social workers and youth outreach practitioners highlighted a distinct surge in environmental despair among adolescents residing in high-pollution industrial corridors. Informant FG1-P4 from

Elbasan stated: "The youth realize they are trapped in a geographic sacrifice zone. They observe the air quality, the total absence of natural safe spaces to interact, and the trash piles accumulating near schools. This creates a deeply rooted sense of fatalism, localized anxiety, and a total alienation from their local community ecosystem".

Practitioner Evaluation Metrics. To assess structural capacity, the study measured the self-reported readiness of social workers to incorporate ecological practices into their daily institutional interventions.

Table 6. Social Work Practitioners' Self-Assessment of Ecological Competence (N = 24).

Evaluative Dimension	Low (%)	Moderate (%)	High (%)
Understanding of Eco-Social Work Concepts	70.8	20.8	8.4
Capacity to Assess Environmental Risks	58.3	33.3	8.4
Institutional Resources for Eco-Programs	91.7	8.3	0.0

Comparative Analysis and Synthesis of Findings. Synthesizing the mixed-methods datasets reveals a stark operational paradox. While quantitative regression models (Table 5) confirm that ecosystem variables exert a severe, statistically significant predictive impact (Beta = 0.36 for air quality, Beta = 0.29 for lack of green space) on the psychological equilibrium of vulnerable populations, qualitative evaluation metrics (Table 6) demonstrate a critical systemic deficit (70.8% low conceptual familiarity) among practitioners tasked with supporting these identical populations. When examining data cross-geographically, a highly nuanced distribution of ecological deprivation emerges. Industrial dust pollution is uniquely concentrated in Elbasan (72.5%), whereas the psychological stress derived from a severe deficit of green spaces peaks in the dense suburban landscape of Tirana (85.0%). Durrës presents a distinct manifestation of climate vulnerability, with 65.0% of vulnerable households experiencing recurring flooding, which structurally damages their housing assets and triggers profound, sustained financial and psychological insecurity.

Table 7. Comprehensive Cross-Geographical Triangulation Matrix.

Geographic Zone	Dominant Environmental Vector	Psychosocial Outcome	Strategic Shift Needed
Elbasan	Industrial Pollution	Health Anxiety, Fatalism	Medical Referrals → Health Advocacy
Tirana	Deficit of Green Space	Social Alienation, Stress	Financial Support → Biophilic Parks
Durrës	Flooding and Open Dumps	Displacement Stress	Emergency Relief → Disaster Resilience

This synthesis confirms that social vulnerability in Albania can no longer be conceptualized exclusively as an economic deficit. It is a socio-environmental construct where ecological degradation directly magnifies economic exclusion.

Proposed Eco-Social Work Action Framework. To resolve the systemic gaps identified in this study, we propose an operational model that bridges the gap between environmental sustainability and social work practice across three distinct institutional tiers:

Micro-Level: Eco-Social Assessment and Therapeutic Nature Engagement. Social work intake protocols must be restructured to encompass environmental variables. Case workers must screen families for environmental risk factors, including proximity to chemical pollution, lack of safe natural light, and clean water access. Concurrently, practitioners should deploy eco-therapy—utilizing organized therapeutic nature engagement to mitigate eco-anxiety, treat adolescent depression, and rebuild self-efficacy among marginalized youth.

Meso-Level: Community-Led Environmental Action and Green Spaces. Social workers must function as community organizers, mobilizing vulnerable neighborhoods to execute local ecological reclamation projects. This includes establishing community gardens in informal settlements, running youth-led recycling initiatives, and developing clean urban pockets. These initiatives achieve a dual purpose: they directly rehabilitate the local ecosystem while building social capital, reducing isolation, and creating green employment channels for marginalized youth.

Macro-Level: Legislative Reform and Policy Interdependence. At the structural level, academic institutions must lead the integration of green social work into university curricula. More critically, advocacy efforts must target amending Law No. 121/2016 on Social Care Services to institutionalize environmental vulnerability within national social risk indexes. This structural evolution will facilitate cross-sectoral collaboration between environmental management authorities and public social protection systems, ensuring environmental justice is embedded within national welfare policies.

CONCLUSION

This study demonstrates that ecosystem sustainability and human social welfare are structurally codependent. Empirical findings from the Tirana-Elbasan-Durrës industrial corridor confirm that localized ecological degradation functions as a powerful, direct determinant of psychosocial stress and social exclusion among vulnerable populations. Compounding this crisis is a systemic gap within Albania's social protection network: national legislation remains bifurcated from environmental policy, and frontline social workers lack the specialized training and institutional mandates required to address environmental injustice. To cultivate sustainable community resilience in the 21st century, the social work profession must shed its anthropocentric boundaries. Transitioning to an integrated eco-social model will empower social work practitioners to safeguard human well-being while actively defending, preserving, and restoring the natural ecosystems that sustain life.

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