



THE INTEGRATION OF THE CONCEPTS OF MIGRATION AND ENVIRONMENTAL SECURITY

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ABSTRACT

The accelerating intersection of climatic and ecological stressors with human mobility challenges conventional separations between migration policy and environmental security agendas. This article proposes an integrated conceptualization in which migration is understood both as a response to environmental risks and as a potential instrument for managing those risks. Using a structured narrative review, we synthesize human security, political ecology, and adaptation frameworks to explain how exposure, sensitivity, and adaptive capacity shape mobility decisions and how mobility feeds back into environmental risk profiles at origin and destination. We argue that internal and cross-border movements can reduce vulnerability by diversifying livelihoods, redistributing population away from high-risk areas, and enabling remittance-financed adaptation, but may also heighten risk when governance gaps channel migrants into hazard-prone settlements or degrade common-pool resources. Integrating migration into environmental security thus requires institutions that expand safe, legal, and affordable mobility options while aligning land-use, infrastructure, and social protection with risk-informed planning.

KEYWORDS

Migration; environmental security; human security; adaptation; resilience; political ecology; risk governance; mobility.

INTRODUCTION

Environmental security traditionally focuses on safeguarding societies from resource scarcity, ecosystem degradation, and disaster risks, whereas migration research emphasizes economic incentives, social networks, and state regulation of mobility. Treating these domains in isolation obscures the mechanisms by which environmental stress alters opportunity structures and how mobility itself reshapes risk landscapes. Climatic shocks, water scarcity, and land degradation can erode livelihoods and raise the variance of income streams, shifting expected utilities toward movement. At the same time, migration redistributes people, skills, and capital across space, changing patterns of land use, urban density, infrastructure demand, and exposure to hazards. An integrated lens is therefore essential to understand when mobility reduces vulnerability and when it magnifies it, and to design policies that harness mobility as part of risk management rather than treating it solely as a failure of adaptation.

This study employs a structured narrative review of peer-reviewed literature and major assessments in migration studies, climate risk, and human security. We mapped three complementary theoretical strands—human security, political ecology, and resilience/adaptation—to the migration decision framework in order to identify points of

integration. Sources were selected for conceptual clarity and for explicit treatment of mechanisms linking environmental change to mobility and vice versa. The review was organized around three guiding questions: how environmental risk parameters enter migration decisions at the household and community level; how institutions mediate the distribution of risk and access to mobility; and how mobility alters environmental security at origin and destination through feedbacks. While not a quantitative meta-analysis, the approach emphasizes triangulation across disciplines and the derivation of policy-relevant propositions. A human security perspective reconceptualizes environmental security as the protection of people from critical, pervasive threats to their lives and livelihoods rather than the defense of territory alone. Within this frame, migration is a legitimate strategy for reducing risk exposure, smoothing consumption, and accessing services, especially where in situ adaptation is constrained by market failures or weak governance. The decision to move depends on exposure to hazards, sensitivity of livelihoods, and adaptive capacity, all filtered through social networks and institutions. Households with access to credit, information, and destination contacts can convert environmental stress into planned mobility; those without may be immobilized despite rising danger, revealing that lack of mobility can be as much a security concern as displacement. Political ecology highlights that environmental risks and adaptive options are structured by power relations, tenure regimes, and infrastructure provision. Industrial siting, extractive concessions, and zoning decisions often concentrate environmental burdens in marginalized communities, shaping both the necessity and the direction of movement. When migrants encounter legal and economic barriers in cities, they frequently settle in informal neighborhoods on floodplains, steep slopes, or heat-vulnerable areas, thereby reproducing environmental insecurity. Conversely, inclusive land and housing policies, universal service access, and participatory planning can transform migration into a pathway that reduces aggregate risk by relocating populations to safer, serviced areas and enabling investment in resilient livelihoods.

Resilience and adaptation frameworks further integrate migration into environmental security by treating mobility as one element of a portfolio of responses. Seasonal and circular migration can diversify income sources and lower covariance with climate-sensitive agriculture, while remittances finance water-saving technologies, home elevation, and livelihood diversification. Yet migration may also create negative feedbacks if labor shortages prompt land-use intensification that depletes groundwater, or if rapid urban inflows outpace utilities and waste management, degrading environmental quality and public health. Whether mobility is adaptive or maladaptive depends on institutional capacity to absorb newcomers, extend services, and regulate land markets, as well as on the distributional effects of relocation.

These perspectives converge on several implications for integrated policy. First, risk-informed mobility pathways—through planned relocation from high-hazard zones, portable social protection, and labor intermediation—can reduce involuntary displacement and protect rights. Second, aligning urban planning with demographic and climate projections lowers multi-hazard exposure by steering growth toward safe, serviced, and transit-accessible areas and by enforcing risk-sensitive building codes. Third, at origins, investments in climate-resilient agriculture, secure tenure, and ecosystem restoration can expand the option set, ensuring that staying is as voluntary as leaving. Fourth, measurement must move beyond counting displaced people toward tracking changes in exposure, sensitivity, and adaptive capacity associated with

mobility, using longitudinal microdata and high-resolution environmental indicators. Finally, international and intergovernmental coordination is required because environmental risks and mobility corridors cross administrative boundaries; coherent legal frameworks and financing for anticipatory action can align incentives across levels of governance.

Integrating migration and environmental security reframes mobility from a residual outcome of failure to a contingent strategy that can either mitigate or exacerbate risk depending on institutional context. By placing human security at the center, acknowledging political-economic structures that allocate exposure, and applying resilience thinking to feedbacks between movement and environment, policymakers can design systems in which safe mobility complements in situ measures. The practical agenda is to expand capabilities for people to move out of harm's way or to remain safely where they are, while ensuring that destinations are prepared to provide services and protect ecosystems. Such an integrated approach advances both environmental security and just, sustainable development.

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