

Policy Brief

Awareness to Action: Bridging the Environmental Literacy Value-Action Gap in Urban Secondary Schools

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Executive Summary

This policy brief presents critical findings from a study investigating the environmental literacy (EL) and pro-environmental behaviors of urban adolescents in Addis Ababa secondary schools. The research reveals a high level of theoretical awareness regarding global environmental issues like climate change. However, a significant "value-action gap" persists, where positive attitudes and environmental concerns fail to translate into sustainable, day-to-day practices. This directly stems from an educational system heavily reliant on rote learning and exam preparation, which neglects localized, practical, and experiential engagement. Pedagogical adjustments alone are insufficient. Sustainable environmental stewardship requires systemic curricular reforms that integrate the cognitive, emotional, and ethical dimensions of environmental literacy. This brief recommends a multi-tiered strategy that transitions from purely teaching *about* the environment to teaching *in* and *for* the environment. By implementing context-specific, experiential learning models and establishing collaborative school-community eco-projects, Ethiopia can foster active, environmentally responsible citizens vital for national climate resilience and sustainable development.

1. Problem Statement

Urban centers in Ethiopia, particularly the capital city of Addis Ababa, are increasingly grappling with complex environmental challenges, including severe waste management issues, rapid deforestation, and water scarcity. While national policies acknowledge the role of education in addressing ecological crises, a stark gap remains between policy intent and classroom outcomes.

Current secondary environmental education (EE) strategies in Ethiopia primarily focus on theoretical abstractions. Instructional delivery heavily emphasizes rote learning, factual lecturing,

and exam preparation, which undermines the potential for youth to engage meaningfully with local ecological challenges. This creates a twofold problem:

- **A Superficial Knowledge Base:** Students hold a decent understanding of macro-level global phenomena (such as the greenhouse effect or global climate trends) but lack a granular, practical understanding of local ecosystems and actionable solutions.
- **The Value-Action Disconnect:** High levels of professed environmental concern and positive emotional attitudes toward nature do not map onto sustainable behaviors. Adolescents remain passive observers rather than proactive agents of change, limiting national adaptive and innovation capacities in the face of ongoing climate vulnerability.

2. Policy Context

Ethiopia's commitment to sustainable development and environmental protection is formally embedded within its constitutional frameworks (Articles 43, 44, and 92) and sequential strategic plans like the Education and Training Policy. These mandates position education as a primary driver for building socio-ecological resilience.

Globally, the conceptualization of environmental literacy has shifted away from purely cognitive metrics toward holistic paradigms. Scholarship emphasizes that comprehensive environmental literacy requires a tri-focal approach: education *about* the environment (knowledge-building), education *in* the environment (experiential, field-based learning), and education *for* the environment (action-oriented citizenship and advocacy).

Despite these global insights, localized empirical evidence evaluating how secondary school structures influence adolescent environmental behaviors in urban East Africa has historically been scarce. This cross-sectional study of secondary schools in Addis Ababa provides vital data demonstrating that the traditional educational framework acts as a constraint. Without addressing the institutional structures that separate knowledge from action, local environmental policy goals will remain largely unfulfilled.

3. Key Findings

- **High Affective but Low Action Metrics:** Urban adolescents demonstrate high scores on environmental concern and express deep biocentric value orientations (valuing nature for its own sake). However, self-reported pro-environmental behaviors score exceptionally low, particularly in domains that require active civic participation or personal sacrifice.

- **The Structural Gap in Instruction:** Secondary school curriculums heavily prioritize teaching *about* the environment. Experiential learning modalities (such as eco-club investigations, neighborhood waste tracking, and conservation field trips) are virtually non-existent due to insufficient teacher training and resource constraints.
- **The Core Link to Pro-Environmental Behavior:** Statistical modeling indicates that theoretical knowledge alone is a weak predictor of actual pro-environmental behavior. Instead, the strongest predictors of sustainable lifestyle adjustments and civic participation among adolescents are:
 1. **Context-Specific Competence:** Practical, local knowledge of *how* to solve ecological challenges (e.g., source-separating urban solid waste).
 2. **Connectedness to Nature:** Regular, direct affective experiences gained through place-based and outdoor learning.
- **Core Conclusion:** The persistent value-action gap is structurally reinforced by a rigid, exam-driven pedagogical environment that isolates the classroom from local urban environmental realities.

4. Policy Options

Option	Description	Pros	Cons
Holistic & Experiential Curricular Reform	Fully integrate cognitive, emotional, and ethical dimensions of environmental literacy into core subjects, shifting instruction to outdoor, project-based, and action-oriented learning.	Targets the root cause of the value-action gap; fosters authentic behavioral shifts and local problem-solving capacity.	Requires comprehensive textbook revisions, extensive teacher upskilling, and changes to standard timetables.
Incentive & Club-Driven Approach	Expand and heavily subsidize co-curricular school environmental clubs, using inter-school competitions, performance metrics, and awards to reward green initiatives.	Can yield rapid, highly visible improvements in school cleanliness and tree planting; easily integrated without altering core curricula.	Risks treating environmental care as an optional, extra-curricular activity; may lead to performative compliance during competitions without sustained lifestyle change.

Recommended Path: A hybrid approach that treats *Holistic & Experiential Curricular Reform* as the primary long-term framework, immediately supported by energized, project-based *School Eco-Clubs* acting as incubators for localized environmental action.

5. Recommended Actions

A. For the Ministry of Education & Regional Education Bureaus:

1. **Revise National Curricula:** Systematically infuse environmental literacy metrics—specifically emphasizing local urban ecosystems, waste management loops, and climate resilience—into secondary school syllabi.
2. **Transform Assessment Frameworks:** Shift national and regional examinations away from pure factual recall toward scenario-based problem-solving questions related to environmental degradation.

B. For Teacher Education Institutions & CPD Providers:

1. **Pedagogical Reorientation:** Restructure pre-service and in-service Continuous Professional Development (CPD) programs to equip teachers with skills in ecopedagogy, place-based education, and field-work facilitation.
2. **Context-Specific Material Development:** Co-design localized manuals and case studies addressing Addis Ababa's specific environmental issues (e.g., water quality in local rivers, urban municipal waste).

C. For School Principals & Administration:

1. **Enable Experiential Scheduling:** Allocate structured school hours for field-based investigations, neighborhood cleaning campaigns, and hands-on laboratory workshops.
2. **Resource Allocation:** Dedicate institutional funds to purchase basic composting equipment, maintain school gardens, and facilitate student-led environmental audits.

D. For School Eco-Clubs & Science Departments:

1. **Community-Linked Projects:** Establish active partnerships with local sub-city sanitation offices, non-governmental organizations, and community groups to run neighborhood environmental defense campaigns.
2. **Peer-Led Auditing:** Empower students to design and run campaigns within the school premises, tracking water usage, managing plastic waste sorting, and monitoring campus green spaces.

6. Implementation Considerations

- **Phasing:** Roll out the experiential learning framework as a pilot phase across selected public and private secondary schools within specific sub-cities of Addis Ababa, allowing for iterative refinement before national scaling.
- **Capacity Building:** Adopt a peer-to-peer instructional model, utilizing master trainers to build the competence of secondary geography, biology, and social science teachers in guiding outdoor inquiry.
- **Resource Mobilization:** Form cross-sector alliances with municipal environment authorities and green-enterprise partners to co-fund experiential educational tools and school recycling bins.
- **Monitoring & Evaluation:** Transition from tracking simple attendance metrics to measuring actual indicators of environmental literacy, combining longitudinal behavioral surveys with objective indicators of school-level waste reduction and ecological action.

7. Stakeholders

Stakeholder	Role & Interest
Ministry of Education	Primary policymaker; accountable for ensuring that school outputs match national green growth and climate-resilient economy targets.
Regional Education Bureaus & ETA	Implementation and quality assurance; responsible for integrating experiential standards into regional school supervision guidelines.
Secondary School Teachers	Key instructional mediators; their comfort with moving past textbook lecturing directly dictates whether students experience real environmental advocacy.
Urban Adolescents & Students	Direct beneficiaries and change agents; building their adaptive skills transforms them into lifelong environmental stewards.
Municipal Sanitation & Environment Agencies	Institutional partners; benefit directly from improved public compliance with city waste, recycling, and conservation strategies.

8. Risks & Mitigation

Risk	Mitigation Strategy
Institutional resistance due to overcrowded school schedules and	Seamlessly embed practical eco-projects directly into the continuous assessment (CA) components of existing subjects, ensuring that

exam obsession.	action-oriented work earns students' academic credit.
Severe resource limitations preventing field trips or purchasing specialized equipment.	Prioritize ultra-local, cost-free micro-environments. Use the immediate school grounds, classrooms, and adjacent neighborhood blocks as primary field sites for ecological mapping and waste audits.
Superficial compliance where green tasks are completed without authentic attitudinal shift.	Infuse emotional and ethical reflection into exercises. Require students to maintain reflective portfolios or engage in structured peer dialogue evaluating the community impacts of their eco-actions.

9. Conclusion

Improving environmental sustainability in urban Ethiopia requires a fundamental departure from superficial, textbook-bound teaching methods. This study provides clear, empirical proof that environmental awareness does not automatically yield environmental preservation. For education to catalyze real ecological transformation, it must move beyond theoretical knowledge and engage the affective, local, and practical spheres of students' lives.

By adopting an experiential, action-oriented reform strategy, policymakers and educational leaders can build a generation of urban youth equipped with both the passion and the practical capacity to lead Ethiopia toward a clean, resilient, and sustainable future.

10. References

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