



Greening Schools, Greening Communities: Climate-Responsive CSR in Philippine Education

Hazel S. Osano^{1*}, Anik Yuesti², Joel Arante Alve³, I Komang Oka Permadi⁴

¹Doctor of Philosophy in Business Management, University of Negros Occidental – Recoletos, Negros Occidental, Philippines

^{2,4}Universitas Mahasaraswati Denpasar, Bali, Indonesia

³University of Negros Occidental – Recoletos, Negros Occidental, Philippines

*Email: hazel.osano@student.uno-r.edu.ph

*Corresponding Author

ABSTRACT

Climate-related disruptions and environmental risks were shown to have direct effects on learning continuity, health, and school operations in the Philippines. This research synthesized recent literature and current policy guidance to explain how education providers reframed CSR from occasional clean-up drives into climate-responsive practices that were planned, measured, and sustained. The review indicated that credible “greening” work relied on three elements: risk-aware continuity planning, whole-school operational routines (water, sanitation, waste, energy use, and campus safety), and community partnerships that addressed local priorities. Results also suggested that programs became more durable when environmental actions were linked to quality assurance routines and learning activities rather than treated as seasonal campaigns. A practical policy direction emerged from the evidence: schools needed a right-sized sustainability agenda with clear ownership, simple indicators, and transparent reporting of progress and limits.

Keywords: environmental sustainability, green schools, waste management



INTRODUCTION

Climate change now reaches higher education in ways that feel immediate and disruptive rather than abstract. In the Philippines, the academic calendar is increasingly shaped by extreme heat, heavy rains, and storm seasons that test campus readiness. When heat indices climb, school leaders choose between protecting health and keeping academic requirements on track. When floods cut access roads or typhoons damage buildings and power lines, teaching plans shift into emergency mode and students lose study time and momentum. Public reporting has shown how extreme heat can force widespread class suspensions and create both health risks and learning setbacks, especially for families with limited capacity to shift into effective remote learning

(Reuters, 2024). For private HEIs, these conditions also translate into operational stress, rising utility costs, pressure on student services, and constant reassurance to parents and learners that campuses remain safe and functional.

Private higher education institutions (HEIs) occupy a distinctive space in Philippine education. They carry a large share of higher education enrollment and serve as major providers of professional training, teacher education, and specialized programs that support local labor markets. At the same time, they operate with business realities: tuition dependence, fixed payroll, maintenance costs, debt obligations, and competition for students. This combination makes climate risk both a moral responsibility and an institutional viability issue. If the campus cannot offer safe learning spaces during heat waves, or if continuity planning fails during disasters, the cost appears in lower satisfaction, reduced retention, and reputational damage. Yet private HEIs also have assets that can be mobilized: technical expertise, research capacity, laboratories, community networks, and the ability to innovate more quickly in some settings than public institutions. Climate-responsive CSR sits at this intersection of responsibility and capability.

Corporate social responsibility (CSR) in education is often reduced to charity drives, donation campaigns, or occasional outreach. In practice, CSR becomes more meaningful when it shapes how an institution allocates resources, manages risk, designs learning, and reports performance to stakeholders. For private HEIs, climate-responsive CSR can include operational measures such as energy efficiency, renewable procurement, water management, waste systems, and heat-sensitive facility design. It can also include academic measures such as integrating climate literacy into programs beyond environmental science, supporting applied research that addresses local resilience needs, and structuring extension programs that strengthen nearby communities. When CSR is climate-responsive, it is not only about “doing good”; it is about doing what is necessary to keep learning safe, equitable, and resilient while reducing the institution’s own contribution to environmental harm.

International debates on sustainability in education increasingly argue for whole-institution approaches, where sustainability learning is supported by the socio-physical environment and by governance practices that make sustainability “normal” rather than optional. Holst (2024) emphasizes that sustainability learning is embedded in organizational contexts, meaning students learn not only from lectures but also from what the institution prioritizes and practices. This perspective is useful for private HEIs because it treats campus life as part of learning: students notice whether the campus wastes water, whether procurement and waste systems are consistent, whether buildings are designed for comfort and safety, and whether leaders communicate climate commitments with clarity and evidence. A whole-institution view also discourages fragmented programs by asking whether sustainability and resilience are part of the institution’s core strategy, budgeting, and quality assurance routines.

Philippine climate and disaster policy signals reinforce the expectation that institutions must plan and participate beyond compliance. The country’s Nationally

Determined Contribution (NDC) communicates priorities and commitments through the UN climate process and frames climate action as a whole-of-society effort that includes both mitigation and adaptation pathways (Republic of the Philippines, 2021). Disaster governance similarly expects systematic preparedness and resilience planning across sectors in the National Disaster Risk Reduction and Management Plan (NDRRMP) 2020–2030 (National Disaster Risk Reduction and Management Council, 2020). While these are national-level documents, they shape the environment in which private HEIs operate by signaling what actions are prioritized, what partnerships are encouraged, and what kinds of reporting and accountability may be expected over time.

This paper focuses on climate-responsive CSR in Philippine private HEIs, with attention to how climate action is organized, financed, measured, and communicated in real institutional settings. The discussion synthesizes recent scholarship on sustainability in higher education, measurement systems such as sustainability rankings and reporting guidelines, and emerging Philippine practices. It then proposes a research design suited to private higher education: one that can capture both the “frontstage” narratives institutions present and the “backstage” routines that determine whether climate and resilience work is consistent. The intended contribution is practical rather than abstract: a grounded framework that helps private HEIs move from scattered “green” activities to coherent, measurable climate action that improves student well-being and strengthens public trust.

LITERATURE REVIEW

A strong anchor for climate-responsive CSR in education is the shift in global framing from “environmental activities” to education system transformation. UNESCO’s Education for Sustainable Development (ESD) roadmap argues that sustainability should be embedded in learning content, teaching methods, institutional culture, and governance, rather than added as a one-week theme or a stand-alone office mandate (UNESCO, 2020). For higher education, this means day-to-day decisions—procurement standards, building designs, cafeteria practices, travel policies, and waste handling—become part of the learning environment. The roadmap also implies that institutions must develop internal capacity: staff who understand sustainability goals, leaders who can connect these goals to institutional strategy, and teachers who can translate sustainability into discipline-specific practice. In private HEIs, this is closely tied to CSR because it turns sustainability from a “nice add-on” into a responsibility that is visible to students, parents, regulators, and partner communities.

The climate science context explains why the education sector cannot treat sustainability as optional. The IPCC’s synthesis report consolidates evidence that climate impacts are intensifying and that the window for effective action narrows when societies delay mitigation and adaptation (IPCC, 2023). Even where the most severe futures are avoided, the report points to escalating risks affecting water, health, food systems, and infrastructure—systems that universities depend on daily. Campuses are physical networks with energy demand, water use, and transport patterns; they are also social

systems that influence attitudes and professional norms. From a CSR lens, the IPCC framing shifts the conversation from “good intentions” to risk management and duty of care: if institutions educate future professionals while ignoring climate risks and opportunities in their own operations, they undermine both credibility and preparedness.

National commitments and plans further shape the context for Philippine private HEIs. The Nationally Determined Contribution (NDC) communicates the country’s mitigation and adaptation priorities and frames climate action as a whole-of-society effort that depends on participation across sectors, not only from environment agencies (Republic of the Philippines, 2021). For private universities, the NDC matters because it signals long-term national direction that influences public funding priorities, regulatory expectations, research agendas, and partnership opportunities. It also supports a practical argument: climate action is not an “advocacy hobby,” but a national development concern that affects public health, infrastructure, and economic stability. When private HEIs align their sustainability planning with national climate priorities, they can justify investments and build stronger collaboration with government and civil society partners.

Disaster risk governance adds another layer to this context. The National Disaster Risk Reduction and Management Plan (NDRRMP) 2020–2030 emphasizes risk governance, preparedness, and resilience building as national directions for reducing disaster impacts (National Disaster Risk Reduction and Management Council, 2020). For education institutions, this implies duties that go beyond emergency response. Universities are expected to plan for risk, maintain continuity, protect lives, and coordinate with local government and other partners when hazards occur. Private HEIs are not exempt from these expectations; their responsibilities are often heightened by the fact that many students, staff, and families depend on the institution for safe facilities, reliable communication, and learning continuity. A climate-responsive CSR agenda should therefore treat DRRM planning and climate adaptation as part of responsible governance rather than separate compliance tasks.

Research on sustainability in higher education points to a recurring gap between “what campuses do” and “what campuses teach.” Many institutions report sustainability projects such as recycling drives or tree planting while core teaching and learning remains mostly unchanged. Others incorporate sustainability in selected programs while campus operations continue patterns that contradict the sustainability message. A systematic literature review focused on sustainable campus operations argues that operations are pivotal because they reduce environmental impacts and can become “living laboratories” that support learning and research at the same time (Oliveira & Proença, 2025). This perspective shifts CSR away from publicity and toward operational decisions that are felt daily by students and staff.

Whole-institution approaches push this argument further by focusing on coherence. In Holst’s framing, sustainability learning is not only a curricular issue; it depends on how the organization is structured and how its socio-physical environment supports or undermines sustainability practices (Holst, 2024). For a private HEI, coherence is visible when leaders can explain sustainability priorities in simple terms, when procurement and

facilities decisions align with those priorities, when faculty members have support to integrate sustainability in their courses, and when student life policies reinforce the same values. Coherence also matters because it reduces the “initiative fatigue” that happens when staff and students see sustainability as a series of disconnected campaigns that disappear after the photo opportunity.

Measurement and reporting shape what counts as “good CSR” in many institutions. In higher education, sustainability rankings have become both carrots and sticks: carrots because they offer recognition and marketing advantage, and sticks because they create reputational pressure when peer institutions improve. The UI GreenMetric World University Rankings is a widely used system in Asia that structures sustainability performance around categories such as setting and infrastructure, energy and climate change, waste, water, transportation, and education and research, with a scoring approach designed to make comparisons easier (UI GreenMetric, 2025a, 2025b). For private HEIs, these categories can help organize data collection and internal conversations, especially where sustainability offices are still building capacity. Yet ranking systems are imperfect proxies for climate and sustainability performance. Boiocchi, Ragazzi, Torretta, and Rada (2023) note comparability issues in UI GreenMetric indicators, including the difficulty of fairly ranking institutions across different climates, geographies, and baseline resource conditions. Alberti (2025) similarly warns that ranking participation can carry self-selection bias and may be used as a branding tool that masks weaker internal change. These critiques matter in the Philippine setting because private HEIs can be tempted to chase visibility—tree planting, one-day events, glossy reporting—while underinvesting in the less visible but more consequential work of campus retrofits, heat management, and continuity planning.

Philippine private HEIs provide concrete signals of how reporting is evolving locally. De La Salle University-Dasmariñas (DLSU-D), for example, maintains a sustainability reporting page that publishes annual sustainability reports and highlights recognition in UI GreenMetric while describing initiatives across areas such as energy and climate change, water, waste, transportation, and community service (De La Salle University-Dasmariñas, 2024). Even when the details vary by year, the act of publishing reports creates a public record that stakeholders can question, compare, and use to track change over time.

Another Philippine example is the University of San Carlos (USC), which presents a sustainability report framed as a Catholic educational institution’s response to sustainability and the SDGs. The report describes institutional policies such as bans on single-use plastics and highlights initiatives linked to renewable energy and water systems, including partnerships that support community development (University of San Carlos, 2025). The importance of such reporting for CSR is that it connects campus operations to moral commitments, public service, and collaboration, moving sustainability away from a purely technical conversation and toward institutional identity and accountability.

Curricular integration remains a central challenge. Sustainability content can be uneven across disciplines, and its inclusion often depends on faculty interest and perceived institutional support. Duran and Mariñas (2024) provide local evidence that teacher intention to integrate sustainability in Philippine higher education curricula is shaped by factors linked to institutional conditions, implying that integration is not simply about awareness but about resources, training, and perceived control. For private HEIs, the implication is straightforward: if sustainability integration is a priority, it must show up in curriculum review processes, faculty development plans, and quality assurance routines, not only in slogans.

Public statements from Philippine climate governance actors strengthen the case for cross-disciplinary climate education. The Climate Change Commission has emphasized that many young people care about the environment yet may lack deeper understanding of climate change causes, long-term impacts, and urgency, and it has urged the Commission on Higher Education to promote climate education across disciplines (Climate Change Commission, 2025). This is relevant in private higher education because it points to general education and professional programs alike. Graduates in business, information technology, engineering, health, and education will all face climate-linked risks and ethical dilemmas in their work, so climate literacy should be treated as part of graduate preparedness rather than an elective interest.

Equity considerations sharpen the meaning of climate-responsive CSR in the Philippine context. Climate shocks do not affect all students equally. Students with long commutes, precarious income, limited access to cool study spaces, and unstable internet connections are more exposed to learning loss when campuses suspend classes or shift to flexible modes. Reporting on heat-driven education disruption highlights both health concerns and uneven capacity to shift to remote learning, which can undermine long-term education goals (Reuters, 2024). For private HEIs, climate-responsive CSR that ignores equity risks becomes a reputational claim without educational fairness.

Taken together, the literature suggests that climate-responsive CSR for private HEIs is not a single program. It is a pattern of institutional behavior that links governance, risk planning, operational decisions, teaching and research, and credible reporting. The gap in the Philippine setting is not the absence of isolated initiatives; it is the lack of systematic understanding of how these pieces are coordinated, funded, and sustained in the private higher education sector. A research approach that compares private HEIs can clarify what coherence looks like in practice and which choices make climate-responsive CSR more than a set of isolated green projects.

METHODOLOGY

The proposed study uses a desk-based documentary analysis. The analysis was conducted to examine how climate-responsive CSR in Philippine education was framed in recent evidence and how those expectations translated into workable school and community actions. The scope covered 2020 to the present, prioritizing sources that addressed (a) climate and disaster impacts relevant to education continuity, (b) whole-

school sustainability and operational routines, and (c) policy guidance shaping school and community environmental action. Materials were gathered from three evidence streams: peer-reviewed and technical literature on climate risks and adaptation; education-sector policy and program documents; and intergovernmental guidance on education for sustainable development and child-centered climate resilience. Document identification used keyword-based searches in academic discovery tools and curated repositories, supported by targeted retrieval from official websites of Philippine education agencies and recognized international organizations. Inclusion criteria required sources to be credible (government issuances, intergovernmental reports, peer-reviewed or well-documented technical outputs), relevant to education settings in the Philippines or directly transferable to them, and explicit about recommended practices, responsibilities, or indicators. Sources were excluded when they lacked traceable authorship, were promotional, or were too general to inform implementation choices.

Analysis followed a structured extraction approach. For each document, key information was recorded on: the problem being addressed (risk, disruption, environmental harm, health exposure), the implied accountability expectation (what schools were expected to demonstrate), the operational “entry points” (safety and continuity rules, waste and sanitation routines, learning resource integration, community partnership structures), and the suggested evidence base (metrics, monitoring tools, documentation practices, and reporting cadence). Coding clustered findings into four implementation domains: (1) continuity and safety under climate hazards, (2) campus operations and resource management, (3) learning integration and capacity building, and (4) community linkages and shared outcomes. Themes were triangulated across sources to avoid relying on a single document type, and statements were retained only when they were supported by multiple credible references or were grounded in official policy guidance. The synthesis was written as a policy-oriented results narrative that emphasized feasibility, role clarity, and indicator discipline rather than aspirational claims.

RESULTS AND DISCUSSION

The reviewed evidence confirmed that “greening” in education had shifted from symbolic environmental activities toward climate-responsive responsibilities linked to continuity, safety, and credible public value. Climate risk assessments emphasized that climate change had already increased impacts on human systems and that adaptation capacity had limits when hazards intensified faster than preparedness (IPCC, 2022). In education terms, this pressure appeared as more frequent disruptions, safety decisions during extreme weather, and heightened scrutiny on whether institutions protected learners and staff. Global child-focused evidence also showed climate hazards disrupting schooling at large scale, reinforcing that education continuity had become a climate-resilience issue, not only an operational inconvenience (UNICEF, 2024).

Within Philippine education governance, continuity and safety policies provided a clear anchor for climate-responsive CSR. DepEd guidance on suspending classes and work during disasters and other calamities formalized the expectation that institutions

make timely decisions to reduce harm, indicating that preparedness and response were not optional add-ons (Department of Education, 2022). Complementary DepEd disaster preparedness measures for schools strengthened the operational framing of resilience by outlining responsibilities during weather-related disturbances (Department of Education, 2021). These policies mattered for CSR design because they converted “care for learners” into specific, documentable routines: hazard monitoring, decision rules, and response actions that could be reviewed and improved after each event.

A second confirmed pattern was that operational sustainability actions became more credible when they were treated as daily systems rather than periodic campaigns. Guidance related to water, sanitation, and hygiene monitoring in schools demonstrated that routine data collection and standardized monitoring tools were already part of how the education sector maintained minimum conditions for health and learning (Department of Education, 2021). Waste management issuances reinforced similar expectations for segregation and safe disposal, showing that environmental practice inside schools could be governed through clear rules and compliance checks, not only advocacy (Department of Education Region VIII, 2021). These operational systems mattered because they created measurable behaviors and documentation trails that allowed schools to show progress, identify gaps, and avoid overclaiming impact.

The third pattern centered on learning integration and whole-institution change. UNESCO’s roadmap for education for sustainable development emphasized that sustainability required changes in how education institutions operate and how learning environments reinforce values and behavior, not only the addition of isolated lessons (UNESCO, 2020). In the Philippine climate policy context, the Nationally Determined Contribution also recognized education and public awareness as part of climate action, reinforcing that learning systems were part of national resilience efforts (Republic of the Philippines, 2021). This alignment suggested that climate-responsive CSR in education gained strength when it connected operational “greening” to learning activities and capacity-building, so that actions were reinforced by understanding, not only compliance.

A fourth pattern involved community linkage. “Greening schools, greening communities” worked best when school actions were designed with local government and community priorities in mind, especially for waste management, disaster preparedness, and environmental awareness. The evidence implied that community partnerships reduced duplication and improved relevance when schools positioned CSR as support for shared local outcomes rather than as one-directional outreach. Recent Philippine climate governance messaging also highlighted the role of higher education leadership and research in strengthening climate education across disciplines, pointing to an expectation that education institutions contribute beyond their fences through knowledge, training, and community engagement (Climate Change Commission, 2025).

Climate Change Commission

Across these findings, the policy implication was straightforward: climate-responsive CSR in Philippine education became defensible when it was “right-sized” and

evidence-led. Programs that attempted broad sustainability agendas without clear ownership and indicators risked becoming seasonal, personality-driven, and difficult to sustain. By contrast, a focused agenda—built around (1) continuity and safety routines, (2) operational resource management (WinS, waste, and basic environmental compliance), (3) learning integration consistent with sustainability education guidance, and (4) community partnerships tied to local risk and environmental priorities—allowed institutions to show credible progress while staying within capacity. The reviewed sources also supported a reporting discipline that separated outputs (activities and compliance steps completed) from outcomes (changes in risk exposure, health conditions, or sustained practices), and encouraged institutions to state limits honestly when attribution was weak or monitoring windows were short.

CONCLUSION

Climate-responsive CSR in Philippine education was shown to be most credible when it addressed learning continuity, health, and environmental practice through systems that could be sustained and checked over time.

The evidence supported a shift away from one-time environmental events toward routine operational controls, clear safety and continuity decisions during hazards, and sustainability actions tied to learning and community priorities. Greening efforts became more durable when ownership was defined, indicators were kept simple, and progress was documented consistently rather than narrated broadly. Community partnerships strengthened relevance when school actions matched local risk and environmental needs, reducing the tendency to treat CSR as a publicity cycle.

Overall, the strongest approach was a focused, right-sized sustainability agenda that balanced ambition with capacity, emphasized continuity and protection, and treated evidence as part of normal school governance.

Acknowledgement

The authors acknowledge the academic, technical, and administrative support received during the preparation of this manuscript. The authors also appreciate the availability of publicly accessible policy documents, institutional reports, technical references, and scholarly literature that supported the desk-based documentary analysis. Constructive comments from editors and anonymous reviewers are also acknowledged for improving the clarity and scholarly quality of the manuscript.

Declaration Statement

The authors declare that no external funding was received for this research. The data supporting the findings of this study were obtained exclusively from secondary sources, including peer-reviewed literature, government and education-sector policy documents, technical reports, institutional sustainability materials, and publicly available references cited in the manuscript. These sources can be accessed through the original

publishers, institutional websites, government portals, and the reference list of the article. As this study employed a desk-based documentary analysis and did not involve human participants, animals, experimental procedures, or the collection of sensitive personal data, formal institutional ethics approval was not required. The authors declare that they have no financial or non-financial competing interests that could have influenced the conduct, analysis, interpretation, or reporting of this research.

REFERENCES

- Alberti, C. (2025). A critical literature review on the UI GreenMetric ranking system. *The Journal of Technology Transfer*. <https://doi.org/10.1007/s10961-025-10223-9>
- Boiocchi, R., Ragazzi, M., Torretta, V., & Rada, E. C. (2023). Critical analysis of the GreenMetric World University ranking system: The issue of comparability. *Sustainability*, 15(2), Article 1343. <https://doi.org/10.3390/su15021343>
- Climate Change Commission. (2025, April 23). *CCC highlights crucial role of CHED in climate education*. <https://climate.gov.ph/news/985>
- De La Salle University-Dasmariñas. (2024). *Sustainability reports*. <https://www.dlsud.edu.ph/sustain/reports.htm>
- Duran, M. K. L., & Mariñas, K. A. (2024). Sustainability integration in Philippine higher education curricula: A structural equation modeling assessing teacher intention to integrate. *Sustainability*, 16(9), Article 3677. <https://doi.org/10.3390/su16093677>
- Intergovernmental Panel on Climate Change. (2023). *Climate change 2023: Synthesis report*. <https://www.ipcc.ch/report/ar6/syr/>
- National Disaster Risk Reduction and Management Council. (2020). *National disaster risk reduction and management plan (NDRRMP) 2020–2030*. <https://ndrrmc.gov.ph/attachments/article/4143/NDRRMP-2020-2030-Final.pdf>
- Oliveira, M. C., & Proença, J. (2025). Sustainable campus operations in higher education institutions: A systematic literature review. *Sustainability*, 17(2), Article 607. <https://doi.org/10.3390/su17020607>
- Republic of the Philippines. (2021). *Nationally Determined Contribution (NDC)*. United Nations Framework Convention on Climate Change. <https://unfccc.int/sites/default/files/NDC/2022-06/Philippines%20-%20NDC.pdf>
- Reuters. (2024, April 29). Philippine students suffer in wilting heat, thwarting education efforts. *Reuters*.
- UI GreenMetric. (2025a). *Methodology*. <https://greenmetric.ui.ac.id/about/methodology>
- UI GreenMetric. (2025b). *Criteria & indicator*. <https://greenmetric.ui.ac.id/about/criteria-indicator>
- UNESCO. (2020). *Education for sustainable development: A roadmap*. <https://unesdoc.unesco.org/ark:/48223/pf0000374802>

University of San Carlos. (2025). *Catholic educational institution sustainability report*. <https://usc.edu.ph/catholic-educational-institution-sustainability-report>