

The Urgency of Developing Climate-Change-Responsive Graduate Competencies Bachelor Law Study Program in Indonesia

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Abstract. Climate change poses urgent legal and governance challenges in Indonesia, where environmental degradation continues despite the existence of comprehensive regulatory frameworks. One major contributing factor is weak environmental law enforcement, which is partly linked to the limited capacity of legal professionals to engage with climate-related norms, evidence, and responsibilities. This article examines how Indonesian undergraduate law curricula have not yet systematically incorporated climate-change-responsive graduate competencies, resulting in a gap between environmental regulation and its effective implementation. Employing normative legal research through statutory and conceptual analysis, the study identifies the absence of explicit climate-conscious learning outcomes within current Outcome-Based Education (OBE) frameworks in Indonesian law schools. The findings suggest that legal education remains largely doctrinal and insufficiently interdisciplinary, failing to equip graduates with competencies in climate governance, environmental ethics, and climate litigation. The article therefore recommends the integration of climate-responsive learning outcomes into curriculum design, including competencies in scientific literacy, regulatory enforcement, climate justice, and interdisciplinary legal practice. Strengthening these competencies is essential for preparing future legal professionals to support environmental protection and advance Indonesia's national climate commitments.

1 Introduction

Most scholars with different disciplines raise a concern on climate change. It is no longer a scientific concern but an existential challenge affecting global governance, national policy, and everyday realities. It also has become a structural challenge for governance, regulation, and legal accountability [1]. Its impacts, such as rising sea levels, worsening air quality, extreme weather events, and biodiversity loss, directly affect human security and sustainable development. or Indonesia—an archipelagic state with vast tropical forests and significant biodiversity—the climate crisis presents both vulnerability and

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responsibility. Yet, Indonesia's pursuit of economic expansion, rapid industrialization, and foreign investment has not been accompanied by proportionate climate mitigation efforts, nor has it been supported by strong environmental law enforcement mechanisms. These enforcement gaps not only undermine Indonesia's climate commitments but also expose structural deficiencies within the broader legal system. Surprisingly, almost every year, Indonesia faces natural disasters that are caused by forest land clearing for business gain.

Law plays a central role in climate governance. It shapes regulatory standards, structures compliance mechanisms, guides judicial reasoning, and determines accountability for environmental harm [2]. Indonesian Law No. 39 of 2009 on Environmental Protection and Management also mandates that environmental education is a right for the Indonesian community without any discrimination [3] Art.65 (2). Consequently, legal education must prepare future lawyers, judges, prosecutors, academics, and policymakers capable of understanding, interpreting, and applying climate-related norms in a multidimensional context. However, Indonesian legal education, particularly at the undergraduate level, has not systematically integrated climate-change-related competencies into learning outcomes or graduate profiles. The absence of these competencies weakens the capacity of law graduates to meaningfully contribute to climate governance, environmental protection, and sustainable policy development [4].

This gap becomes more significant in light of Indonesia's formal adoption of Outcome-Based Education (OBE) under the National Higher Education Standards and the Indonesian National Qualifications Framework (KKNI).[5] OBE requires universities to formulate measurable graduate learning outcomes that reflect societal needs and national priorities. Yet, while OBE has been institutionally mandated, its potential to embed climate-responsive competencies within law curricula remains underutilized. Most law programs continue to emphasize doctrinal positivism and traditional legal subjects without explicitly incorporating competencies related to climate governance, environmental ethics, or climate litigation.

This article argues that the weakness of environmental law enforcement in Indonesia cannot be separated from the absence of structured climate-conscious competencies in legal education. By employing normative legal research based on statutory interpretation, conceptual analysis, and doctrinal review, this study examines how OBE can serve as a strategic framework to redesign undergraduate law curricula. It identifies the gap in existing learning outcomes and proposes the integration of climate-responsive competencies as part of graduate profiles in Indonesian law schools.

By positioning OBE as the analytical foundation, this article contributes to the discourse on legal education reform by linking climate governance challenges with curriculum design. Strengthening climate-responsive graduate competencies is not merely an academic exercise; it is a structural step toward enhancing Indonesia's capacity to implement environmental law effectively and fulfill its national and international climate obligations.

2 Method

This study employs a normative legal research method, focusing on the analysis of legal norms, concepts, and regulatory frameworks relevant to climate governance and legal education reform. The research is designed to identify doctrinal gaps in Indonesian undergraduate law curricula, particularly the absence of explicit climate-change-responsive graduate competencies, and to propose strategies for curriculum integration through Outcome-Based Education (OBE). The study relies on primary legal materials, including Indonesian statutory instruments such as Law No. 12 of 2012 on Higher Education and Law No. 32 of 2009 on Environmental Protection and Management, as well as key international climate instruments, including the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. These sources provide the normative foundation for assessing Indonesia's legal obligations in both environmental governance and higher education standards [3]. In addition, secondary legal materials consist of scholarly literature on climate law, environmental enforcement, legal education reform, and OBE-based curriculum design. Academic journals, comparative studies, and theoretical works are used to contextualize Indonesia's regulatory framework within broader developments in global climate-related education.

The normative approach is applied through three complementary forms of analysis. First, statutory analysis is used to examine the extent to which Indonesian environmental and education laws mandate climate responsibility and competency-based learning outcomes. Second, conceptual analysis is employed to clarify the meaning and relevance of climate-conscious graduate competencies within legal education, including ethical, interdisciplinary, and governance-oriented dimensions. Third, a limited comparative perspective is incorporated by referring to international trends in climate law teaching and competency-based legal curriculum reform. Together, these methods support the central argument of the article: that strengthening environmental law enforcement in Indonesia requires not only regulatory frameworks, but also law graduates equipped with climate-responsive competencies embedded systematically through OBE-oriented curriculum development.

3 Results and discussion

3.1 The Obligation to Adopt Outcome-Based Education in Indonesia

Outcome-Based Education (OBE) is not merely an academic preference but a regulatory requirement within Indonesia's higher education system. Under Law No. 12 of 2012 on Higher Education, universities are obligated to design curricula based on measurable graduate learning outcomes aligned with the National Higher Education Standards (*Standar Nasional Pendidikan Tinggi*/SN-Dikti). These standards emphasize the formulation of learning outcomes (*Capaian Pembelajaran Lulusan*/Course Learning Outcomes/CLO) as the core of curriculum development. Because of this legal framework, every faculty, including faculties of law, must design their programs to meet the national expectations for graduate competencies.

The obligation is further reinforced through implementing regulations, including Government Regulation No. 4 of 2022 and the Indonesian National Qualifications Framework (KKNI), which standardize graduate competency levels across disciplines which well-known under the concept that educational programs must adopt a competency-based framework.[6] OBE fits this requirement by ensuring that every curriculum is oriented toward measurable competencies instead of merely content delivery. This regulation requires universities to restructure their teaching, assessment, and evaluation systems to align with graduate learning outcomes. Consequently, institutions that ignore OBE would be in violation of the regulatory standards set forth by the Indonesian government.

Another key legal foundation is the Indonesian National Qualifications Framework (*Kerangka Kualifikasi Nasional Indonesia*/KKNI), enacted through Presidential Regulation No. 8 of 2012. KKNI establishes standardized levels of competencies that all graduates must achieve, ranging from knowledge and skills to attitudes and professional ethics. Because KKNI operates as a national benchmark, universities are obligated to align their curriculum outcomes with its descriptions. Without adopting OBE, institutions would be unable to demonstrate compliance with the competency levels mandated by KKNI.

Law schools nowadays are not only responsible for transmitting legal doctrine but also for preparing graduates to respond to evolving societal challenges. Climate change, as a multidimensional governance issue involving environmental protection, human rights, regulatory enforcement, and international obligations, demands competencies that extend beyond traditional positivist legal training. However, the persistence of weak environmental law enforcement in Indonesia suggests that legal education has not yet fully translated these regulatory mandates into graduate capacities that support climate governance.

Implementation guidelines for OBE are also embedded in Ministerial Regulation No. 44 of 2015 on National Higher Education Standards.[7] This regulation provides detailed instructions on how universities must develop CLOs, course learning outcomes, and assessment strategies. It also requires institutions to establish internal quality assurance mechanisms that monitor whether learning outcomes are achieved. Through this rule, the obligation to adopt OBE becomes practical and enforceable, not merely theoretical or aspirational.

Accreditation mechanisms further strengthen the obligation to adopt OBE. The National Accreditation Board for Universities (BAN-PT) and the Independent Accreditation Institutions (LAM) such as LAMHUKUM evaluate programs based on the clarity and implementation of learning outcomes though this LAMHUKUM is still under process of establishment. Most importantly, many bachelor law programs in Indonesia also accredited by International Accreditation from FIBAA, AHPGS, and ACQUIN where also requires the adoption of OBE. Accreditation instruments explicitly assess how well CLOs, curriculum structures, and teaching processes reflect OBE principles. Programs that fail to adopt OBE risk receiving low accreditation ratings, which directly affect institutional credibility and student enrolment.

The Indonesian legal framework also requires universities to ensure that learning outcomes address societal needs and global competitiveness. Law No. 12 of 2012

emphasizes that education must prepare students for the future, contribute to the nation's development, and respond to international challenges. OBE aligns with these mandates because it focuses on producing graduates who possess relevant and measurable competencies. Thus, adopting OBE is not only a regulatory requirement but also a strategic necessity for national development.

Moreover, OBE is essential for facilitating curriculum transparency and accountability, as mandated by national regulations on quality assurance. Ministerial Regulation No. 62 of 2016 on Internal Quality Assurance Systems obliges universities to continually evaluate their curriculum based on outcome achievements. OBE offers a systematic approach by connecting intended outcomes, actual performances, and corrective actions in a measurable cycle. This ensures that educational programs remain aligned with legal mandates and ongoing societal expectations.

Finally, the adoption of OBE reflects Indonesia's commitment to harmonizing its education system with international standards. As globalization intensifies, Indonesian graduates are expected to compete regionally and globally, especially within ASEAN frameworks such as the ASEAN Qualifications Reference Framework (AQRF). By legally mandating OBE, Indonesia aligns its higher education standards with international practices in curriculum design and competency measurement. Therefore, the obligation to adopt OBE is both a legal requirement and an essential step toward improving the quality and global relevance of Indonesian higher education.

3.2 Designing Climate Change and Responsive Learning Outcomes

Climate change has become a multidimensional legal issue that intersects with environmental law, international law, constitutional rights, administrative governance, and corporate accountability.[8, pp. 417–418] For Indonesian law faculties, this requires a shift from treating climate change as a peripheral topic toward embedding it systematically within graduate competencies. Within an Outcome-Based Education (OBE) framework, the central question is not simply what subjects are taught, but what climate-relevant capacities law graduates must demonstrably achieve [3].

The scientific basis of climate change must be incorporated into legal learning outcomes to ensure that graduates can engage with empirical evidence. Law students should understand the fundamentals of climate science, including greenhouse gas emissions, carbon cycles, and the role of biodiversity in climate regulation.[9] These scientific concepts enable future lawyers to interpret environmental impact assessments (AMDAL), forensic ecological reports, and expert testimonies with accuracy. Thus, climate-responsive learning outcomes should explicitly state scientific literacy as a supporting competency for legal analysis.

A climate-change-responsive curriculum therefore requires the formulation of learning outcomes that align with the graduate profile of future lawyers, judges, policymakers, and legal scholars who will operate in an increasingly climate-affected legal landscape. Rather than adding climate change as an isolated course, OBE demands that competencies be integrated across the curriculum through measurable outcomes.

In relation to legal theory, learning outcomes should require students to master the principles of climate governance under international law [8]. This includes knowledge of

the United Nations Framework Convention on Climate Change (UNFCCC)[10] the Kyoto Protocol[11], and the Paris Agreement[12], along with Indonesia's Nationally Determined Contributions (NDCs). Understanding these instruments is essential for assessing the extent of Indonesia's legal obligations and compliance mechanisms. Graduates with such competencies will be capable of contributing to international negotiations, drafting national policies, and advising governments or NGOs on climate-related matters [13].

Learning outcomes must also address domestic climate governance within Indonesian law. Law graduates should be capable of interpreting and applying key legislation such as Law No. 32 of 2009 on Environmental Protection and Management[3] and Presidential Regulation No. 98 of 2021 on carbon pricing [14]. These frameworks create obligations for environmental enforcement, emissions reduction mechanisms, and sustainable land-use planning. A climate-responsive graduate profile must therefore include the ability to navigate Indonesia's regulatory landscape and identify gaps in climate-related legal protections.

In terms of legal skills, climate-responsive learning outcomes should ensure that students are able to analyze climate-related disputes and litigation strategies. Climate litigation is growing both globally and in Indonesia, involving claims against governments, corporations, and individuals for failing to mitigate environmental harm. Law graduates need the ability to interpret scientific evidence, evaluate causation, and craft persuasive arguments linking legal norms to climate impacts. Including litigation literacy as a specific learning outcome ensures graduates can meaningfully participate in future climate-related legal proceedings.

Another important area is policy drafting and regulatory design. Climate-responsive learning outcomes should require graduates to develop skills in drafting regulations, creating climate adaptation plans, and designing mitigation strategies such as carbon trading or environmental taxation. These competencies are crucial because Indonesia increasingly relies on regulatory approaches to address emissions, promote renewable energy, and control deforestation. Equipping students with such skills enhances their readiness to serve as policymakers, legal consultants, or public sector leaders in climate governance.

Ethical and professional responsibilities must also be included in climate-responsive learning outcomes [15]. Graduates should internalize environmental ethics, climate justice principles, and intergenerational responsibility as part of their legal training. Environmental

decisions often affect vulnerable populations, including indigenous communities, coastal residents, and rural societies dependent on natural resources. By embedding ethics-based learning outcomes, law faculties ensure that future legal practitioners approach climate issues with a sense of justice, fairness, and sustainability.

Finally, interdisciplinary collaboration should be reflected in the learning outcomes to prepare graduates for real-world climate governance challenges. Climate change problems require cooperation between legal experts, environmental scientists, economists, and public planners. Law students should therefore develop communication skills for cross-sector collaboration and be capable of integrating non-legal data into legal assessments. By embedding interdisciplinary competencies into the learning outcomes,

Indonesian law faculties can produce climate-literate graduates capable of contributing effectively to national and global responses to climate change.

Taken together, these competency domains illustrate that climate-conscious legal education is not merely an academic expansion but a structural requirement for strengthening Indonesia's environmental law enforcement and governance capacity. Through OBE, Indonesian law faculties have both a regulatory mandate and a strategic opportunity to redefine graduate profiles so that future legal professionals are equipped to respond effectively to the legal realities of climate change.

4 Conclusion

The adoption of climate-responsive learning outcomes in Indonesian legal education is an urgent and necessary step to prepare future legal professionals for the rapidly evolving climate governance landscape. Climate change presents complex legal, scientific, and ethical challenges that demand a new generation of lawyers who can integrate multidimensional knowledge into legal reasoning. By aligning curriculum design with Outcome-Based Education principles, law faculties can ensure that graduate competencies reflect the realities of global climate obligations and national environmental priorities. This approach not only improves academic quality but also strengthens Indonesia's capacity to respond to climate crises through informed legal frameworks.

Furthermore, embedding climate literacy, policy drafting skills, litigation capabilities, and environmental ethics into learning outcomes will enhance the readiness of law graduates to participate in climate governance across governmental, corporate, and civil society sectors. Indonesian law schools must therefore commit to curriculum reform that mainstreams climate change theory and practice throughout legal education. Such reform positions faculties of law as key contributors to national sustainability efforts and guardians of environmental justice. Ultimately, climate-responsive graduate competencies enable Indonesia to build a legal community that is both professionally capable and socially responsible in addressing the challenges of climate change.

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