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Integrating Ecotheology, Social Studies Education, and a Waste-Care Movement to Build Ecological Character at MTsN 1 Rembang, Indonesia

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A R T I C L E I N F O

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A B S T R A C T

Waste is an environmental problem that education must address through moral awareness and behavioural change, not only through knowledge transfer. This study analyses how ecotheology, social studies (Ilmu Pengetahuan Sosial, IPS) education, and a school waste-care movement can be integrated to build ecological character at MTsN 1 Rembang, a state Islamic junior secondary school (madrasah) in Rembang Regency, Central Java. A qualitative single-case study was conducted through document analysis of 29 publicly available sources: national and regional regulations, a regency waste-management roadmap, Ministry of Religious Affairs materials, official madrasah profile data, and regional news reports retrieved up to 29 October 2026. The public record, however, says little about how ecotheology is taught within IPS lessons or whether individual students' behaviour has changed.

INTRODUCTION

Waste has become one of the most visible environmental pressures in Indonesia. Estimates from the early 2010s placed the country second only to China among the largest sources of mismanaged plastic waste entering the ocean (Jambeck et al., 2015), and the national waste information system (Sistem Informasi Pengelolaan Sampah Nasional, SIPSN) recorded roughly 29.2 million tonnes of waste generated per year in the 278 regencies and cities that had reported 2025 data at the time of retrieval (D2). The pressure is felt acutely at the local level. In Rembang Regency, Central Java, the regency government's own roadmap describes waste as a serious problem because the final disposal site is still operated by open dumping, has exceeded its capacity and service life, and receives tens of tonnes of waste daily (D1). On 1 October 2026 the pile at that site, Landoh, caught fire, and firefighters needed most of a day to extinguish it (D3, D4). Waste, in other words, is no longer an abstract topic for schoolchildren in Rembang; it is a visible local event.

Technical solutions such as refuse-derived fuel plants, controlled landfills, and community waste banks are necessary, but the regency roadmap itself acknowledges that they depend on household-level sorting and on public participation that remains uneven (D1). This places education in a central position. The question is what kind of education can move a young person from knowing that waste is a problem to acting consistently on that knowledge. Research on environmental behaviour has long shown that knowledge and concern alone predict action weakly, and that values, habits, perceived responsibility, and social context mediate between them (Hungerford & Volk, 1990; Kollmuss & Agyeman, 2002). Character education offers a frame for this problem: Lickona (1991) argues that moral formation requires moral knowing, moral feeling, and moral action together. Applied to the environment, the aim is ecological character: stable dispositions of responsibility, care, discipline, and practical habits toward the natural world.

Three resources are available for pursuing this aim in an Indonesian madrasah. The first is ecotheology, the study of the relation between religious belief and the natural world. Although the term is associated with the argument that religious traditions have contributed to ecological crisis (White, 1967), the broader literature treats religions as reservoirs of moral motivation for stewardship (Hitzhusen & Tucker, 2013). In the Islamic case, the concepts of humankind as steward (khalifah), the trust (amanah), the balance (mizan), and the prohibition of wastefulness (israf and tabdzir) have been developed into environmental teaching (Foltz et al., 2003; Nasr, 1996), and the Indonesian Council of Ulama issued a fatwa in 2014 stating that Muslims are obliged to keep the environment clean and to avoid wasteful behaviour in managing waste (D29). Since 2025 the Minister of Religious Affairs has also promoted ecotheology and a Love-Based Curriculum (Kurikulum Berbasis Cinta) for madrasah (D22, D23, D25).

The second resource is social studies education. IPS in lower secondary school integrates geography, economics, sociology, and history around the study of people in society and their environment, a theme that national social studies standards place among their core strands (National Council for the Social Studies [NCSS], 2010). IPS is therefore the subject in which students can analyse why waste accumulates, who bears its costs, and how communities organise to manage it. The third resource is the school waste-care movement: activities such as sorting, collecting, weighing, depositing recyclables in a school waste bank, and cleanup drives, which in Indonesia are usually organised under the Adiwiyata programme, formally the Care and Culture for the Environment in Schools Movement (Gerakan Peduli dan Berbudaya Lingkungan Hidup di Sekolah, GPBLHS), regulated by Ministerial Regulations P.52 and P.53 of 2019 (D27, D28).

These three resources are usually discussed separately. Ecotheology is treated as religious instruction, IPS as cognitive learning, and waste movements as extracurricular activity or as preparation for Adiwiyata assessment. What is missing is an account of how they can be combined into one educational design, and evidence about whether a particular madrasah is positioned to do so. MTsN 1 Rembang is a suitable case. It is a state madrasah in Rembang Regency that has held Adiwiyata status since 2021, reached provincial level in 2024, and operates in a regency where the waste problem is acute and publicly documented (D6, D10, D11).

This study therefore asks four research questions. (RQ1) What waste and policy context shapes environmental education at MTsN 1 Rembang? (RQ2) What does the public record show about the madrasah's institutional engagement with environmental and waste programmes? (RQ3) What do comparable regional schools show about how waste-care activities relate to indicators of ecological character? (RQ4) How can ecotheology, IPS, and the waste-care movement be integrated into a coherent model for building ecological character? The contribution is twofold: a documented empirical account of the case and context, and a testable integration model that specifies what future primary data collection should measure.

LITERATURE REVIEW

Ecotheology in Islamic education

Islamic environmental thought rests on a small number of recurring ideas. The Qur'an describes humankind as a steward on earth (Q. 2:30), warns against spreading corruption on earth after it has been set in order (Q. 7:56), observes that corruption has appeared on land and sea because of what people's hands have earned (Q. 30:41), instructs believers not to be excessive in consumption (Q. 7:31), and condemns squandering (Q. 17:26–27). The image of the cosmos as a balanced order that humans must not transgress (Q. 55:7–9) supplies the idea of mizan, and the prophetic tradition that cleanliness is half of faith (Muslim, Sahih, hadith 223) links hygiene to piety. Scholars have drawn on these sources to argue for an Islamic environmental ethic in which nature is a sign of God, not merely a resource (Nasr, 1996), and to document traditional institutions of resource protection such as hima and harim (Foltz et al., 2003).

In Indonesia, this reasoning has moved from scholarship into practice and policy. Mangunjaya and McKay (2012) argue that grassroots education combining Islamic principles with traditional conservation methods is more promising than top-down conservation alone, and later field work with mosques and Islamic boarding schools in West Sumatra showed that faith-based messaging can be used operationally (McKay et al., 2014). Mangunjaya (2011) and Mangunjaya and Praharawati (2019) discuss how teaching and fatwas have been used to build conservation awareness. The Indonesian Council of Ulama's Fatwa No. 47 of 2014 applies the same logic to waste by stating that Muslims should keep the environment clean, use goods for benefit, and avoid wasteful behaviour (D29). For this study, ecotheology denotes the explicit use of such theological concepts to give students reasons and motivation for ecological responsibility. It is not a separate subject but a value layer that can be threaded through existing subjects.

IPS as the Analytic Bridge

Values need a mechanism that connects them to the observable world. IPS can supply that mechanism because its disciplines study exactly the phenomena that make waste a social problem. Geography studies spatial patterns and the human–environment relationship; economics studies consumption, scarcity, and value creation; sociology studies norms, institutions, and collective action; and history studies how societies have protected or exhausted shared resources. The NCSS (2010) framework places people, places, and environments, together with production, distribution, and consumption, among its core themes, and the education for sustainable development literature stresses that learners need both critical understanding and the capacity to act (UNESCO, 2017). In the madrasah, IPS can therefore be the place where theological values are translated into questions that students can investigate with local data.

The Waste-care Movement and Adiwiyata

The Adiwiyata programme is Indonesia's long-running school environmental recognition system. Under Ministerial Regulation P.52/2019, the care-and-culture movement is organised around planning, implementation, and monitoring, and schools are recognised at district, provincial, national, and independent (mandiri) levels under P.53/2019 (D27, D28). In Rembang, district officials describe six aspects that schools must address: cleanliness, sanitation, water conservation, energy conservation, waste management, and innovation (D6). Waste-care activities, such as sorting, weighing, bank-sampah deposits, and cleanup drives, are therefore both a compliance requirement and a potential site of moral learning. The educational question is whether these activities remain ceremonial or become habitual.

Ecological Character and its Indicators

Following the focus of this study, ecological character is operationalised through four indicators. Responsibility is acceptance of a duty of stewardship for shared spaces and resources. Care is affective concern for the environment and for other living things. Discipline is consistent adherence to rules and routines that protect the environment. Habits of reducing and sorting waste are repeated practical behaviours such as refusing unnecessary packaging, separating waste streams, and depositing recyclables. In Lickona's (1991) terms, responsibility and care correspond mainly to moral feeling, discipline and habits to moral action, and the understanding built through IPS to moral knowing. Figure 1 shows the resulting framework.

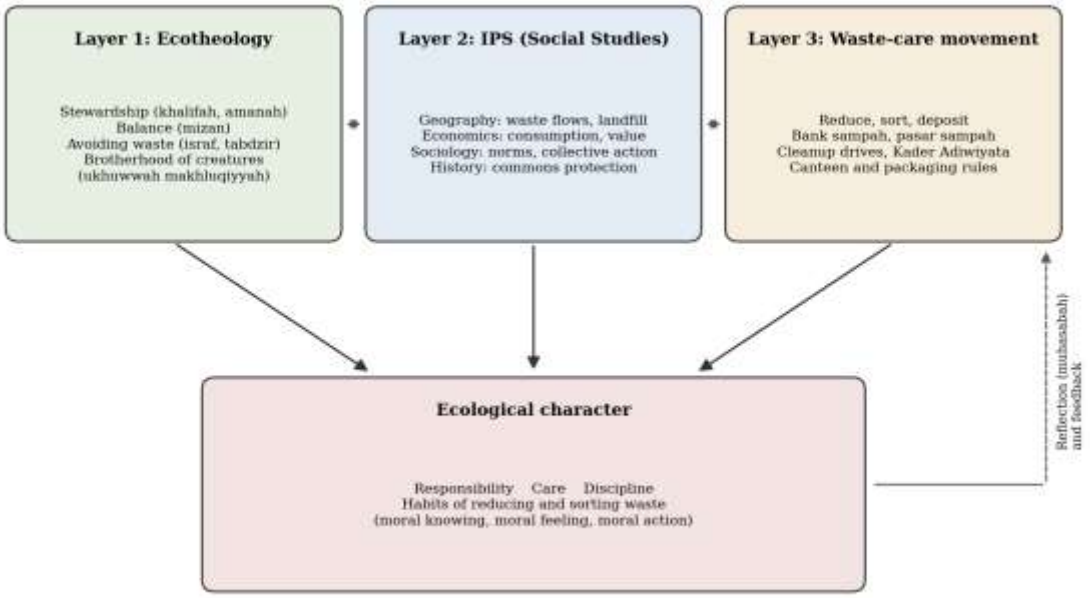


Figure 1. Three-Layer Framework for Integrating Ecotheology, IPS, and The Waste-Care Movement to Build Ecological Character

METHODOLOGY

Research Design

The study used a qualitative single-case design (Yin, 2018). The case is MTsN 1 Rembang, bounded in space by the madrasah and its regency setting and in time by the period 2021–2026, which covers its Adiwiyata assessment and the most recent public reporting. The principal method was document analysis, the systematic review and interpretation of documents to elicit meaning and develop empirical knowledge (Bowen, 2009). This design suits a case in which institutional commitments, policy frames, and publicly reported practices are the available evidence, and it permits triangulation across independent issuers, which is the main safeguard of validity in document-based research.

Data Sources and Selection

Documents were identified through repeated searches of government portals, the Ministry of Religious Affairs' regional news channels, the Rembang Regency government site, national and regional news outlets, and institutional repositories, using Indonesian and English search terms combining the madrasah's name, Rembang, Adiwiyata, waste (sampah), waste bank (bank sampah), ecotheology (ekoteologi), and Love-Based Curriculum. Searches were completed on 29 October 2026. A document was included if it (a) came from a government body, a ministry unit, a madrasah or school, an academic repository, or an established news outlet with an identifiable publisher; (b) concerned waste in Rembang, MTsN 1 Rembang, the Adiwiyata programme in Rembang, or ecotheology policy in madrasah education; and (c) for empirical items, was dated between 2021 and 2026. Social-media posts, undated pages, and items without a verifiable publisher were excluded. The resulting corpus contains 29 documents (D1–D29), listed in Appendix A and cited in the text by code. Five of them concern MTsN 1 Rembang directly (D6, D10, D11, D12, D13); the others establish the waste context, the policy frame, and comparable practices in other Rembang schools.

Data Analysis

Analysis followed the iterative sequence of data organisation, coding, display, and conclusion drawing described by Miles et al. (2014). First, each document was entered in a register recording issuer, date, type, and relevance. Second, passages were coded deductively against the four indicators of ecological character and the three layers of the framework (ecotheology, IPS, waste-care movement), with inductive codes added where patterns emerged (for example, documentation gap, ceremonial event, incentive mechanism, and packaging problem). Third, codes were arranged in matrices (Tables 3 to 5) to compare evidence across indicators and across schools. Fourth, tentative conclusions were checked by triangulating across source types, such as comparing the madrasah's own statements with district award records and ministry policy. Throughout, the analysis distinguished what a document reports as fact from what its author claims, and it records the strength of evidence for each indicator.

Trustworthiness and Ethics

Credibility was supported by source triangulation and by preferring primary government documents for quantitative figures. Confirmability was supported by the document register in Appendix A, which allows readers to trace each claim. All sources are public, no personal data of students were collected, and individuals are mentioned only where their public office is part of the cited statement. The study does not report interviews, classroom observations, or surveys, and the findings should be read with that boundary in mind; its consequences are discussed in Section 6.

RESEARCH RESULT

The Waste and Policy Context (RQ1)

The Rembang regency roadmap for 2025–2026 reports, on the basis of SIPSN data, an estimated waste generation of 97,163.15 tonnes per year, or 266.20 tonnes per day, in 2024 (D1). Organic waste made up 38.1% of the total, plastic 34.45%, and paper 13.4%, with the largest share coming from markets and public facilities (D1; Figure 2). The share of plastic is notable because it indicates how much of the waste stream consists of material that is, in principle, avoidable at the source or recoverable through sorting. An earlier academic study, citing regency data for 2020, put generation at about 236 tonnes per day and described the Landoh site as the only final disposal facility in the regency, operated as an open dump despite a sanitary landfill design (D5). Table 1 summarises the key indicators.

Table 1. Key Waste-Management Indicators for Rembang Regency

Indicator	Value	Source
Estimated waste generation, 2024	97,163.15 t/year (266.20 t/day)	D1
Composition: organic / plastic / paper	38.1% / 34.45% / 13.4%	D1
Waste facilities active, 2024	1 central waste bank, 66 unit waste banks, 4 TPS3R sites, 1 final disposal site	D1
Final disposal method	Open dumping; capacity and service life exceeded	D1, D5
Planned response	Refuse-derived fuel plant (100 t/day capacity) and landfill rearrangement at Landoh	D1
Fire at Landoh, 1 October 2026	A tipping area of about 1.9 ha burned; suspected cause: discarded cigarette butts in fresh waste and dry grass	D3, D4
Adiwiyata schools in the regency, 2024	107 (81 district, 21 provincial, 2 national, 3 independent)	D6
District Adiwiyata awards, 2026	32 schools	D7, D8
National Adiwiyata awards, 2025	7 Rembang schools, including MTsN 4 Rembang	D9

Note. TPS3R = reduce-reuse-recycle waste processing site. Percentages are from the regency roadmap, which cites SIPSN.

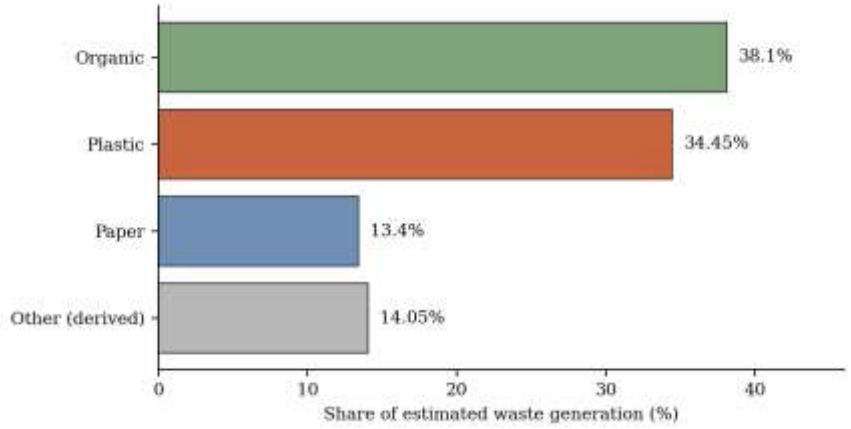


Figure 2. Composition of Estimated Waste Generation in Rembang Regency, 2024 (D1). The "Other" Category is Derived By Subtraction From 100%.

The roadmap treats education as part of the solution. It commits to expanding Adiwiyata schools, to integrating waste-management material into school curricula, and to promoting "zero waste" schools and Islamic boarding schools that teach sorting, reuse, and composting, and it records that Adiwiyata schools already contribute by reusing organic and inorganic waste and running awareness campaigns (D1). At the national level, the Ministry of Religious Affairs has placed environmental education within its ecotheology agenda. The Minister called on educational institutions in May 2026 to develop ecotheology and the Love-Based Curriculum, whose five loves include love for the natural environment (D22). In October 2026, at an event titled "Ecological Repentance toward Adiwiyata Schools," the Ministry described the curriculum as building an interactive relation among God, humans, and nature, and reported that evaluation by madrasah and pesantren supervisors had shown positive attitudinal change (D23). The Minister has also stated that the approach is being integrated into the curricula of some 80,000 madrasah and 42,000 pesantren (D24), and the Director General of Islamic Education has linked the translation of ecotheology to Green Madrasah and Green Campus programmes (D25). These are ministerial claims reported by the press. They establish a strong policy mandate but have not been independently verified in the sources reviewed.

Institutional Trajectory of MTsN 1 Rembang (RQ2)

MTsN 1 Rembang is located in the Lasem sub-district, though it carries the regency's name (D13). It is accredited A (D10). The Ministry's madrasah portal lists 857 students in 31 study groups, 52 teachers, and 63 staff members, and records the school as a district Adiwiyata school from 2021 and as a research-oriented flagship madrasah (D10). For the 2022/2023 academic year the madrasah admitted 284 new students in eight groups and ran two special-track classes, one for general or research subjects and one for religious studies (D13).

The environmental trajectory can be reconstructed from four public records. In November 2021 an assessment team of the district environment office, the district religious affairs office, and Adiwiyata-independent schools visited the madrasah as a candidate Adiwiyata school; the head of the madrasah told the team that the madrasah aimed to build the character of every member of the madrasah community as environment-loving, not merely to take part in the selection, and the team leader remarked that the school felt visibly changed on arrival (D11). The same report adds a general caution from the assessors that activities already carried out are sometimes omitted from Adiwiyata documentation, which points to a recurring documentation gap (D11). In December 2022 the new head listed Madrasah Sehat (healthy madrasah), Adiwiyata, a pilot of the Merdeka Curriculum, and an anti-bullying programme as the madrasah's flagship programmes (D12). In June 2024 MTs Negeri 1 Rembang was among 11 Rembang schools awarded Adiwiyata at provincial level, and district officials stated that these schools had applied all six Adiwiyata aspects, including waste management, across planning, implementation, and monitoring (D6). Table 2 summarises the timeline.

Table 2. Documented Environmental Milestones of Mtsn 1 Rembang

Date	Event	Source
17 Nov 2021	Assessment visit for candidate Adiwiyata school; head frames programme as character formation; assessors caution that real activities are sometimes left undocumented	D11
2021	Recognised as district-level Adiwiyata school	D10
Jul 2022	Intake of 284 new students in eight groups; two special-track classes	D13
Dec 2022	Head cites Madrasah Sehat, Adiwiyata, Merdeka Curriculum pilot, and anti-bullying as flagship programmes	D12
25 Jun 2024	Awarded provincial-level Adiwiyata; all six aspects reported implemented	D6
Dec 2025	Not among the seven Rembang schools receiving national Adiwiyata recognition (MTsN 4 Rembang was)	D9

Note. The absence of national recognition for 2025 is a statement about the sources reviewed, not about the madrasah's performance.

Two features of this record matter for the framework. First, the madrasah's leadership has publicly framed Adiwiyata as character formation, which supports the premise that environmental programmes are meant to shape dispositions and not only the physical campus. Second, the public record contains no description of how waste is handled inside the madrasah (for example, whether it operates a waste bank or composting unit), no IPS lesson materials, and no student-level data. The institutional commitment is documented; the educational mechanism is not.

Waste-care Practices in Comparable Rembang Schools (RQ3)

Because the public record on MTsN 1 Rembang is thin, the study examined what comparable schools in the same regency report. These cases are not offered as substitutes for MTsN 1 data. They show the repertoire of practices available locally and the character outcomes that schools themselves attribute to them. Table 3 summarises seven documented cases.

Table 3. Waste-Care Practices Reported by Comparable Schools and Events in Rembang

School or event	Documented practice	Character indicator emphasised	Source
MTsN 5 Rembang (Mar 2022)	Took part in the district National Waste Care Day drive: collected and sorted household and public-area waste, weighed waste and residue, and deposited it in district containers	Responsibility; habits	D14
MAN 1 Rembang (Nov 2022)	Introduced daily litter-picking as an educative alternative to physical punishment for late students; the vice-principal for student affairs expected it to build discipline and rule-compliance	Discipline; care	D15
MTsN 3 Rembang (Aug 2024)	District Adiwiyata award; working groups coordinating greening, waste management, and environmental literacy; waste bank, sorting, tree planting, and student Adiwiyata cadres	Responsibility; habits	D16

School or event	Documented practice	Character indicator emphasised	Source
Regency cleanup, TRP Kartini (24 Feb 2026)	Civil servants and students collected waste, which was weighed on site (369.5 kg)	Responsibility	D21
SMPN 1 Sulang (9 Oct 2026)	World Cleanup Day: watering plants, collecting and weighing waste through the school waste bank, sorting by type, and cleaning, with teachers and school committee	Habits; responsibility	D20
SMPN 1 Rembang (Oct 2026)	About 900 students and 30 teachers cleaned Wates Beach and sorted collected plastic; the event was linked to Pancasila values	Care; responsibility	D17
SMP Islam An-Nawawiyyah (Oct 2026)	Under the theme "Nature Beautiful in the Hands of Santri," a waste market in which students sold dry waste to the school and were paid in stationery, run with a local waste bank; Adiwiyata cadres deposited used cooking oil for e-money credit	Habits; care; economic value of waste	D18, D19

Note. Character indicators are the study's coding of the documented practice, not claims made by the schools in those terms, except where stated.

Three patterns stand out. First, most documented practices operate at the downstream end of the waste hierarchy: collecting, sorting, weighing, and depositing. Few address reduction at the source. The one explicit reference to source-level difficulty comes from the head of a Rembang madrasah aliyah, who identified plastic-packaged snacks as the main challenge to waste reduction (D7). This matters because plastic is more than a third of the regency's waste stream (D1). Second, incentive mechanisms such as stationery payment and e-money credit make the economic value of waste tangible (D18, D19), which links environmental behaviour to the economics strand of IPS. Third, disciplinary framing is available, as in the use of litter-picking to replace physical punishment (D15), but it raises a pedagogical question. Used as a sanction, litter-picking may teach students that waste handling is a penalty, which is in tension with the aim of cultivating care. The head of an award-winning madrasah aliyah likewise said that habituation is meant to ensure that environmental care does not appear only when an assessment is under way (D8), which is the same concern seen from the school side.

Coding of Ecological Character Indicators

Table 4 sets the evidence for MTsN 1 Rembang against that of its comparators for each indicator and rates the strength of the evidence for the madrasah itself. The rating scale is moderate (documented at institutional level by an independent issuer), limited (documented only through leaders' statements or by inference), and not documented.

Table 4. Evidence for Indicators of Ecological Character

Indicator	MTsN 1 Rembang	Comparators	Documents	Strength at MTsN 1
Responsibility	Provincial Adiwiyata with all six aspects reported; head frames programme as character formation	Student Adiwiyata cadres; participation in district cleanup events	D6, D11, D14, D16, D21	Moderate (institutional level)
Care	Leaders' statement on environment-loving character; no student-level evidence	Beach cleanup linked to national values; waste market with Islamic theme	D11, D17, D18	Limited
Discipline	No public evidence of rules or routines on waste	Litter-picking used as an educative sanction	D15	Not documented
Habits of reducing and sorting	Waste management is one of six verified Adiwiyata aspects; internal arrangements not described	Waste banks, sorting, weighing, used-oil deposits, waste market	D6, D16, D18, D19, D20	Limited (inferred from Adiwiyata status)

The coding shows an uneven evidential profile. For responsibility, independent institutional recognition is available. For habits, the madrasah's Adiwiyata status implies compliance but does not reveal practice. For care and discipline, the public record offers nothing specific to the madrasah. This is itself a finding: the dimensions of ecological character that are most important for the integration argument are those least visible in the documents that public institutions currently produce.

Integrating Ecotheology, IPS, and the Waste-Care Movement (RQ4)

The findings suggest an integration design built on the three layers in Figure 1. The first layer supplies reasons: stewardship and trust give responsibility a theological grounding; the prohibition of israf and tabdzir gives a religious reading of waste reduction; and ukhuwwah makhluqiyyah, the brotherhood among creatures that the Minister has used to describe the Love-Based Curriculum (D24), gives care a theological basis. The second layer supplies understanding and critical inquiry through IPS. The third layer supplies repeated practice through the waste-care movement. The layers must interlock. Without the first, the movement can become mere compliance; without the second, values remain exhortation; without the third, understanding does not become habit. Table 5 shows how each IPS strand can host the integration using local data that the regency has already published.

Table 5. IPS Integration Matrix: Ecotheological Value, Inquiry, Action, and Character Indicator

IPS strand	Ecotheological value	Inquiry question grounded in local data	Waste-care activity	Indicator addressed
Geography	Stewardship (*khalifah*), trust (*amanah*), balance (*mizan*)	Where does Rembang's waste go, and what happens at Landoh? How do the 2024 volume and the 2026 fire show limits of the site? (D1, D3)	Map the madrasah's waste flows; locate nearby waste banks (D1 lists 66 unit banks); present a spatial analysis	Responsibility; care

IPS strand	Ecotheological value	Inquiry question grounded in local data	Waste-care activity	Indicator addressed
Economics	Avoiding wastefulness (*israf*, *tabdzir*)	What does a plastic-packaged snack cost the household and the regency? Why can waste have market value? (D1, D18)	Canteen packaging audit; classroom waste market modelled on the local example; deposit simulation	Habits; discipline
Sociology	Cooperation and brotherhood among creatures (*ukhuwwah makhluqiyyah*)	Why do people litter, and which norms or incentives change it? What do the suspected cigarette-butt fire and school cases suggest? (D4, D15)	Class norm survey; student-designed sorting rules; peer campaigns by Adiwiyata cadres	Discipline; care
History and civilisation	Traditions of protected commons (*hima*, *harim*); cleanliness as part of faith	How have communities protected shared resources, and how do modern rules such as Law 18/2008 and Fatwa 47/2014 continue that task? (D26, D29)	Compare traditional and modern rules; write a class commitment on waste	Responsibility

Two design features respond to the weaknesses identified in Section 4.3. Because most existing practices are downstream, the economics and sociology strands deliberately move attention upstream to packaging and consumption choices. Because disciplinary uses of waste handling can undermine care, the model places reflection (*muhasabah*), in which students record and discuss what they did and why, between action and character formation, and it treats cleanup tasks as participation and not as punishment.

DISCUSSION

The main contribution of the findings is to show that the conditions for integration exist at MTsN 1 Rembang, while the evidence of integration itself does not yet exist in public form. The conditions are strong. The waste problem is salient and measured at regency level, the Ministry of Religious Affairs has supplied an ecotheological policy frame, Adiwiyata provides an institutional vehicle, and the madrasah's own leaders describe environmental programmes in terms of character. The missing element is a record of how these conditions are combined in lessons and daily routines.

This gap is consistent with the broader literature on environmental behaviour. Kollmuss and Agyeman (2002) review why pro-environmental knowledge so often fails to produce pro-environmental action and point to the importance of values, emotional connection, and everyday habits. Hungerford and Volk (1990) similarly argue that behaviour change requires entry-level sensitivity, ownership of the issue, and empowerment to act, not information alone. The three-layer model addresses these factors in a specific order: ecotheology supplies values and emotional meaning, IPS supplies ownership through local inquiry, and the waste-care movement supplies empowerment through concrete action. It also fits Lickona's (1991) triad, with IPS serving moral knowing, ecotheology moral feeling, and the movement moral action.

The comparative cases add a caution. Cleanup events and award assessments are visible and easy to document, but visibility is not the same as internalisation. The 2021 assessors' caution that real activities are sometimes left out of Adiwiyata documentation (D11) and the 2026 remark that habits must persist beyond assessment (D8) both point to the risk that documentation and practice may diverge in either direction. A madrasah could be doing more than its record shows, or less. Waste audits that weigh residual waste per class over time would provide a behaviourally grounded indicator that is harder to stage than an event photograph, and they would feed naturally into IPS data-handling tasks.

The policy context also bears on how ministerial claims should be read. The Minister's statements that supervisors have observed attitudinal change among students (D23, D24) are important as an indication of policy direction, but the sources reviewed give no instruments, sample sizes, or results. A responsible use of ecotheology in the classroom would therefore treat these reports as hypotheses to be tested locally, which is the purpose of the propositions below.

Propositions for Empirical Testing

The model generates four propositions that future primary research at MTsN 1 Rembang, or in comparable madrasah, can test:

P1.Students who study waste through IPS inquiries explicitly linked to ecotheological concepts will show higher scores on responsibility and care than students who receive the same waste activities without such linkage.

P2.Participation in structured, voluntary waste-care routines, such as sorting and deposit schemes, will predict discipline and habit indicators more strongly than participation in occasional cleanup events.

P3.Using waste handling as a sanction will be associated with weaker care scores than using it as a participatory role.

P4.Inclusion of an upstream component, such as a canteen packaging audit, will reduce the residual waste produced per class more than downstream sorting alone.

Practical Implications

For madrasah leaders, the model implies a sequence of steps: map waste flows in the madrasah; embed one ecotheological value and one local-data inquiry in each IPS unit relevant to the environment; establish a standing sorting-and-deposit routine in partnership with a local waste bank; give students roles such as Adiwiyata cadres; and keep a simple waste audit and reflection journal. For regency and ministry officials, the evidence gap suggests that Adiwiyata assessment and Love-Based Curriculum evaluation should collect behaviour-level data, such as audited waste weights and short validated attitude scales, and should publish aggregated results so that claims of attitudinal change can be examined.

Limitations

This study has four limitations. First, it relies exclusively on public documents. It did not include interviews, classroom observation, or student surveys, and so it cannot show what teachers teach or what students do or believe. Its conclusions about integration are therefore design propositions derived from the documented context, not findings about an implemented programme. Second, much of the evidence about MTsN 1 Rembang is mediated by institutional or press communication, which tends to emphasise achievements. Third, the comparators are other Rembang schools and may differ in resources and leadership. Fourth, coding was performed by a single analyst, although the document register in Appendix A allows the coding to be audited. Some figures, such as the portal's enrolment data, carry no date stamp and should be read as the situation when retrieved.

CONCLUSIONS AND RECOMMENDATIONS

This study examined how ecotheology, IPS, and a waste-care movement can be integrated to build ecological character at MTsN 1 Rembang. The documentary evidence shows a regency under measurable and increasingly visible waste pressure, a national religious-education policy that explicitly promotes ecotheology, and a madrasah that has advanced from district to provincial Adiwiyata recognition while describing the programme as character formation. It also shows that the public record is silent on lesson-level integration and individual behaviour change. In response, the study proposed a three-layer model in which theological values give reasons, IPS supplies local inquiry, and structured waste-care routines supply practice, with reflection closing the loop.

ADVANCED RESEARCH

Its next step is primary research within the madrasah, using audited waste data, validated character scales, and interviews, to establish whether the integration builds the responsibility, care, discipline, and waste habits that it is designed to produce.

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