



Politics of agrarian law: Evaluation of Indonesia's Food Estate program from the perspective of ecological justice and the right to a healthy environment

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Abstract

The Indonesian Food Estate Program, introduced as a National Strategic Project, aims to bolster national food security by converting large tracts of forest and swamp land into agricultural zones. This study conducts a normative legal analysis of the program through the lens of ecological justice and the constitutional right to a healthy environment. Doctrinal research was applied to relevant laws and regulations (1945 Constitution, environmental and agrarian laws), official documents, and secondary sources (academic studies, NGO reports, news). We find that the Food Estate initiative has proceeded with inadequate environmental assessment and conflict with constitutional environmental obligations. Notably, spatial analyses show that over 1,500 hectares of Central Kalimantan forest – including carbon-rich peatlands – were cleared for the project, contributing to ecosystem degradation and increased flood risks^[1, 2]. Key legal gaps are identified: the Food Estate lacks a specific legal basis beyond strategic project status, AMDAL (Environmental Impact Assessment) procedures have been incomplete or bypassed^[3, 4], and land use regulations (forestry, agrarian, spatial planning) have been inconsistently applied. The program has marginalized local and indigenous communities, violating their rights to environment and land^[5, 2]. We conclude that the Food Estate policy constitutes a form of agrarian misgovernance, undermining sustainability and environmental constitutionalism. Remedies include strict AMDAL enforcement, use of degraded (non-forest) lands, participatory planning (FPIC), and legal reforms to integrate environmental safeguards.

Keywords: Food Estate, environmental justice, environmental law, AMDAL, Agrarian law, deforestation, constitutional rights, Indonesia

Introduction

Food security remains a national priority in Indonesia, where the government has launched a high-profile Food Estate program to expand agricultural production. Under President Joko Widodo, the Food Estate was fast-tracked as a National Strategic Project (PSN), especially in Central Kalimantan, North Sumatra, and Papua. The program's goal is to increase staple crop output by converting presumed "idle" land – including swamps and forests – into mechanized farms. The initiative has been promoted as a response to shrinking rice fields in Java and to mitigate potential food crises^[11]. In 2020-2021 the government targeted tens of thousands of hectares, with participation by the Ministry of Agriculture, Ministry of Environment and Forestry (MoEF), Ministry of Defence, and regional authorities^[12, 13].

However, the Food Estate policy has drawn immediate controversy. Analysts warn it entails "agrarian misgovernance," in which pursuit of national food ambitions compromises sustainability and legal norms^[5]. Detractors note that large-scale clearing of peatlands and forests – often high in biodiversity and carbon – is planned, potentially undermining Indonesia's environmental commitments and human rights. Already, environmental groups have documented deforestation, peatland drainage, and floods linked to the project's pilot sites in Central Kalimantan^[1, 8]. Constitutional scholars also point out that the program bypasses regional autonomy and local consent, conflicting with decentralized governance.

This tension highlights a policy gap: the centralized design of the Food Estate (top-down PSN) clashes with constitutional mandates on environmental protection and people's welfare. Article 28H(1) of the 1945 Constitution guarantees every citizen the right to "a good and healthy environment"^[6], and Article 33(4) requires that national economic development be sustainable and environmentally conscious^[9]. At the same time, Agrarian Law (UUPA) enshrines the social function of land and recognizes communal rights. Yet the Food Estate strategy has proceeded with limited public participation and uneven application of environmental law, raising questions about justice and legality.

In sum, the introduction of the Food Estate has uncovered a significant legal-environmental problem: how to reconcile the goal of food security with ecological justice and constitutional environmental rights. Is the state adequately protecting Indonesia's forests and peatlands? Are local communities' rights being respected? What legal and institutional reforms are needed to ensure this major agrarian policy does not violate environmental law? This study addresses these questions by evaluating the Food Estate program through the lenses of legal doctrine and ecological justice. It identifies the key legal gaps in permitting, environmental assessment, and land law; examines the program's compliance with constitutional rights; and proposes reforms to align agrarian strategy with environmental justice.

Executive Summary

This article examines Indonesia's large-scale Food Estate Program – a government initiative to develop new agricultural zones – and its implications for environmental law and justice. The program has been framed by policymakers as a solution to food security, but it has sparked controversy over deforestation, peatland degradation, and community rights. This study asks how the Food Estate aligns with ecological justice principles and the constitutional right to a healthy environment, and what legal gaps emerge in its implementation.

Using a juridical-normative (*yuridis normatif*) methodology, we reviewed the 1945 Constitution, environmental statutes (e.g. Law No. 32/2009 on Environmental Protection and Management), agrarian and forestry laws, and relevant regulations (e.g. Presidential Regulations and Ministerial Rules on the Food Estate)^[6, 7]. We also analyzed secondary sources: official reports, NGO investigations, and academic critiques. In particular, satellite and field reports from NGOs (Pantau Gambut, Greenpeace, WALHI, and Mongabay) document that the Food Estate in Central Kalimantan cleared over 1,500 hectares of forest and peatland in just two years^[1, 8], driving local floods and carbon emissions. These findings raise concerns of “agrarian misgovernance” and breach of environmental rights^[5, 2].

Our analysis identifies several systemic issues. Legally, the Food Estate has functioned as a National Strategic Project (PSN), listed in Presidential Regulations No. 3/2016 and 109/2020, without a detailed implementing law. Environmental Impact Analysis

(AMDAL) – Mandated by law for any major land conversion^[3] – has been delayed or incomplete. For example, Ministry of Agriculture officials stated in 2020 that they were preparing AMDALs with the Ministry of Environment and Forestry^[4], but subsequent audits suggest insufficient review. Meanwhile, forestry regulations (e.g. Permen LHK P.24/2020 on “Food Estate forest areas”) have been issued and revoked quickly, creating uncertainty. Social and indigenous rights have been sidelined; customary communities report loss of land and livelihoods.

In light of Indonesia's constitutional guarantees – Article 28H(1) guarantees “a good and healthy environment”^[6] and Article 33(4) mandates sustainable, environmentally sound development^[9] – the Food Estate program raises legal and ethical questions. The ecological justice framework demands that policy balance human food needs with ecosystem protection and fair treatment of all communities. Our findings suggest the program fell short of this balance: environment-driven harms have been borne by vulnerable peatland and indigenous areas, without adequate benefits or consent.

To address these issues, we propose concrete legal remedies. First, AMDAL and environmental permitting must be fully enforced: any Food Estate development should require rigorous Environmental Impact Assessments and public consultation, consistent with Law No. 32/2009^[3, 4]. Second, the use of forest or peat soils should be strictly limited; authorities should favor degraded or agricultural lands over ecologically sensitive areas. Third, local and indigenous rights must be protected through Free, Prior and Informed Consent (FPIC) mechanisms and benefit-sharing. Fourth, regulatory clarity is needed: the government should revise the legal framework (Presidential/ministerial rules) to integrate sustainability criteria and accountability measures.

Finally, court and legislative oversight should be leveraged: for example, government procurement of land for Food Estate must follow the Land Acquisition Law (No.2/2012) and respect constitutional land ownership rights.

This assessment concludes that without such reforms, the Food Estate risks becoming a repeat of past failed projects – “an ecological tragedy” rather than a food security solution^[10, 1]. By realigning the program with environmental law, sustainable development principles, and participatory governance, Indonesia can better ensure that expanding food production does not compromise the public trust in natural resources or the right to a healthy environment.

Research Questions

- 1. Ecological Impact:** What have been the environmental outcomes of the Food Estate program, especially regarding deforestation, peatland degradation, and ecosystem health?
- 2. Legal Compliance:** How does the program comply with Indonesian environmental law, particularly the requirements of Environmental Impact Assessment (AMDAL) and forest-use permits?
- 3. Legal-Institutional Gaps:** What gaps or conflicts exist in the current legal framework (constitution, laws, regulations) governing the Food Estate, land use, and environmental protection?
- 4. Rights and Justice:** How do principles of ecological justice and constitutional rights (to food and a healthy environment) apply to the Food Estate, and what violations have occurred?
- 5. Policy Remedies:** What practical legal remedies and policy reforms can ensure the Food Estate respects environmental rights and sustainability while achieving food security?

Methodology

This research uses a **normative juridical** approach (*yuridis normatif*). First, we collected primary legal sources: the 1945 Constitution, statutory laws (e.g. UU No.5/1960 on Agrarian, UU No.32/2009 on Environmental Protection, UU No.41/1999 on Forestry, UU No.23/2014 on Regional Government, UU No.2/2012 on Land Acquisition) and relevant regulations (e.g. Government and Presidential Regulations, Ministerial Regulations). Secondary sources included official government releases, policy documents, and academic literature. For example, we reviewed Presidential Regulation No.3/2016 and No.109/2020 (listing Food Estate as a National Strategic Project) and Ministerial Regulation LHK No. P.24/2020 (on forest areas for food estate)^[14], as well as the recent Permenhut No.20/2025 (defining Food Estate and related terms)^[15].

Second, we applied legal interpretation and doctrinal analysis. We examined how these Laws and regulations define rights, obligations, and limits (e.g. Article 28H(1) Constitutional right to a healthy environment^[6], Article 33 agricultural land directives^[16], AMDAL requirements in UU 32/2009^[3]). We identified areas of legal tension: for instance, Forestry Law prohibits clearing protected forest, whereas Food Estate plans include forest conversion. We traced institutional duties (which ministry issues permits, how regional plans align with national projects).

Third, we incorporated empirical data and theory for context. Reports from NGOs (Pantau Gambut, Greenpeace, Wahana, etc.) and media (Antara, Mongabay) provided

concrete examples of the program's impacts (e.g. hectares cleared, flood damage) and procedural history (e.g. AMDAL status) ^[1,4]. Academic concepts (ecological justice theory, sustainable development norms, and public trust doctrine) were applied to interpret findings in a rights-based framework. Finally, we developed conclusions and recommendations by synthesizing legal analysis with policy context: proposing reforms consistent with constitutional mandates and environmental principles.

Legal Framework

Indonesia's legal system provides a strong formal basis for environmental protection and agrarian rights. Most notably, the 1945 Constitution enshrines environmental and social principles. Article 28H (1) explicitly guarantees that "[e]very person has the right to live in physical and spiritual well-being, to have a home, and to obtain a good and healthy environment" ^[6]. Further, Article 33(3)–(4) vests state control over natural resources "for the greatest benefit of the people," and mandates that the national economy be organized with principles of social justice, sustainability ("berkelanjutan"), and environmental insight ("berwawasan lingkungan") ^[17]. Article 28I(4) also acknowledges indigenous and traditional community rights (important for indigenous land claims). These constitutional norms impose binding obligations: development programs must respect environmental quality and broad public welfare.

On statutory law, Environmental Protection Law (UU No. 32/2009) is central. It mandates sustainable development and requires an Environmental Impact Assessment (AMDAL) for any project with significant effects ^[3]. Article 22(1) states: "Every business and/or activity that has a significant impact on the environment must have an AMDAL" ^[3]. The law also guarantees public participation in AMDAL processes and provides for environmental quality standards and sanctions. Forestry Law (UU No. 41/1999) governs forest management: it classifies lands into protected forest, conservation, and production forest, and generally prohibits land conversion without strict procedures (ministerial approval or designation as "Forest Area for Food Security", KHKP). Agrarian Law (UU No. 5/1960) sets the "social function" of land (land use must serve national welfare) and requires land use planning; it vests state control over land while recognizing community (adat) rights. Spatial Planning Law (UU No. 26/2007) requires regional governments to prepare spatial plans consistent with environmental norms, including use of forests. Regional Government Law (UU No. 23/2014) further decentralizes natural resource management, giving provinces and districts responsibilities for environmental control under national standards.

Specific to the Food Estate, recent Regulations include Presidential and ministerial rules. Presidential Regulation (Perpres) No.3/2016 and its update No.109/2020 list the Food Estate program as a National Strategic Project, giving it priority status. A Coordinating Ministerial rule (Permenko Perekonomian No.6/2024) similarly includes "Peningkatan Penyediaan Pangan Nasional/Food Estate" as a strategic program ^[18]. In forestry, Ministerial Regulation P.24/2020 (later revoked) provided for allocating up to 173,000 ha of forest as KHKP for Food Estate, and for converting unproductive production forest (HPK) under certain conditions. More recently, Minister of Environment and Forestry Regulation No.20/2025 formally defined "Food

Estate" and "Forest Areas for Food Security (KHKP)" ^[15], signaling ongoing regulatory adjustments. On land acquisition, Law No.2/2012 requires fair compensation when land is taken for public purposes (Food Estate qualifies as public interest), and Law No.11/2020 (Cipta Kerja) has streamlined certain permits (though partially rolled back by judicial review).

In sum, Indonesia's legal framework (constitutional, statutory, and regulatory) provides strong principles of environmental protection, participatory decision-making, and social justice. It also places limits on converting forests or damaging ecosystems. These laws serve as the yardstick for evaluating whether the Food Estate program's implementation has respected ecological justice and the right to a healthy environment.

Discussion

Ecological Impacts and Deforestation

Empirical evidence indicates that the Food Estate program has caused substantial environmental change. Spatial analyses by NGOs report extensive forest and peatland clearing in Food Estate zones. For example, Pantau Gambut (an environmental monitoring NGO) found that over 1,500 hectares of Central Kalimantan forest have been cleared in one Food Estate site, much of it on peat soils ^[1]. This includes about 700 ha converted to cassava plantations; Greenpeace found similar figures (~760 ha) for that area since late 2020 ^[1]. More recent analysis (Jan–Oct 2022) documented an additional 233 ha of deforestation in project areas, including 137 ha of secondary peat forest in Pilang village and 96 ha of protected forest with 2–3 meter peat depth ^[8]. These findings directly contradict official claims that Food Estate would avoid peatland; instead, scientists warn that opening peat forests "will release roughly 62.25 metric tons of CO₂ per hectare per year" from drainage ^[8].

The loss of forest cover has immediate ecological consequences. Local communities report that clearing upstream forests has exacerbated floods. Residents of Tewai Baru village in Gunung Mas Regency observed that flood levels tripled after nearby Food Estate land was cleared ^[19]. Mongabay reports that villagers link these floods to removal of forest humus and lower water retention ^[19]. In the same areas, cassava crops under the project have failed – cassava plants were found stunted and tubers shriveled, with abandoned excavators left in fields ^[20]. This suggests that much of the cleared land may not even be suitable for its intended crops.

These outcomes illustrate a breach of sustainable development principles. Large-scale conversion of peat and tropical forest for a single-crop estate has well-known risks: peatland drainage leads to soil subsidence, fires, carbon emissions and biodiversity loss. Indeed, experts have long warned that Indonesian soil in former peatland (bekas PLG areas) is notoriously infertile for large agriculture and that past projects in the 1990s failed for similar reasons ^[2]. The present Food Estate replicates those patterns: "Proyek ini gagal karena kondisi tanah yang tidak cocok ... praktik pengeringan lahan gambut ... kerusakan lahan gambut..." ^[2]. The SIEJ press release notes that mass peat drainage can cause forest fires, haze, floods, and long-term carbon emissions ^[21]. These ecological impacts run counter to Indonesia's constitutional mandate (Art. 33(4)) that development be "berkelanjutan" (sustainable) and environmentally sound ^[9].

Moreover, deforestation has violated the state's duty over natural resources (Art. 33(3)– (4)). Article 33(3) declares that land, water and natural riches are controlled by the state “For the greatest prosperity of the people”^[16]. Clearing carbon-rich peat for commercial farms may not serve public welfare if it undermines flood control and local livelihoods. Environmental justice theory emphasizes equitable treatment of ecosystems and communities. Here, the ecological burdens (loss of biodiversity, increased fire and flood risk, carbon release) have been borne by local and indigenous peoples, rather than by national policymakers. The Walhi director cited in Mongabay warned that these patterns show “agrarian misgovernance” – the state's food ambitions are compromising justice and sustainability^[5]. In sum, the ecological evidence indicates that the Food Estate has damaged protected ecosystems without adequate benefit to the affected communities, violating both statutory protections and principles of ecological justice.

AMDAL and Environmental Assessment Compliance

Indonesian law requires a thorough Environmental Impact Assessment (AMDAL) for any project with major land-use changes^[3]. In theory, each Food Estate site should have completed an AMDAL before clearing began. The 2009 Environment Law (as amended) states unequivocally: “Every business and/or activity that has a significant impact on the environment must have an AMDAL.”^[3] AMDAL is meant to identify the project's environmental costs, prescribe mitigation measures, and involve public consultation.

In practice, however, the AMDAL process for the Food Estate has been incomplete or equivocal. Government statements in late 2020 emphasized that AMDAL preparation was underway: the Agriculture Ministry announced coordination with MoEF “for the preparations of AMDAL ... and land certificates” for the project^[4]. However, by late 2023 no public records show final AMDAL approval for the main Central Kalimantan sites. According to MoEF officials, the Central Kalimantan Food Estate did eventually undergo AMDAL evaluation, but the results have not been transparently disclosed. Independent reports suggest that some local approvals may have been granted after project launch, raising questions about procedural compliance.

This gap has critical legal implications. Under Law No.32/2009, bypassing or delaying AMDAL would be illegal. If the Food Estate's land clearing proceeded without final AMDAL approval, it would constitute an unlawful environmental activity. Such violations are subject to administrative sanctions (fines, permit revocation) or criminal penalties under the law. Yet enforcement appears weak. Environmental lawyers note that even strategic projects like Food Estate are not exempt from AMDAL rules, unless a special provision says otherwise. (Notably, some Presidential Regulations on PSN do not explicitly waive environmental assessments.) The general assumption – “we will ensure environment protection” – cannot substitute for the mandated legal process.

The irregular AMDAL process also violated principles of participatory governance. Law 32/2009 requires affected communities to be involved in AMDAL scoping and hearings. Reports from the field indicate that many local people were not adequately consulted before forests were cleared. The exclusion of local voices breaches the

environmental rights component of Article 28H(1): a “good and healthy environment” includes having a say in projects that affect one's home environment. The Food Estate thus exemplifies the very problem of “narasi pembangunan top-down” (top-down development narrative) criticized by local NGOs^[22].

In conclusion, our review finds non-compliance with AMDAL law in multiple Food Estate areas. This procedural failure has contributed to poor outcomes (e.g. inappropriate land use) and conflicts. It highlights a broader governance issue: national urgency (food security) was prioritized over due process. For genuine ecological justice, AMDAL must be treated not as a bureaucratic hurdle but as a substantive safeguard. Any future expansion of the Food Estate should only proceed with full AMDAL completion, transparent reporting, and incorporation of mitigation (e.g. strictly avoiding deep peat, restoring affected wetlands) – in line with Law 32/2009^[3].

Permitting, Land Conversion, and Regulatory Gaps

The Food Estate program has exposed several legal gaps and conflicts in land-use regulation. One major issue is the conversion of forest land to agriculture. The initial Food Estate sites in Central Kalimantan were largely in areas classified by forestry law as production or protected forest. According to the forestry regulations in effect, converting such lands for non-forestry uses requires specific processes: either a formal change of status (if outside protected/conservation forest) or release by decree. In 2020, the Ministry of Environment and Forestry issued Permen P.24/2020 permitting up to 173,000 ha of Hutan Produksi Konversi (HPK) and designating certain Forest Areas for Food Security (KHKP). However, this Permen was later revoked (status: “Tidak berlaku”)^[23], leaving an unclear legal basis for further conversions. The subsequent Ministerial Regulation 20/2025 reinstated the concept of KHKP but defined it more narrowly and set new conditions^[24]. The back-and-forth suggests regulatory uncertainty: businesses and officials have struggled to know which rules apply.

Meanwhile, the state's obligation under Agrarian Law and Article 33 to use land for “kemakmuran rakyat” (people's welfare) seems at odds with assigning forest for export crops. Land rights have also been contentious: while farmers were promised training and land access under the Food Estate, many indigenous locals report losing customary rights. The conflicting use of “forest land” for agriculture violates both forestry law and the principle of social function: forest is meant to serve public/environmental welfare, not simply as idle reserves.

Another regulatory gap is institutional responsibility. The Food Estate spans multiple jurisdictions (village, district, and province). Spatial planning law (UU 26/2007) gives districts authority over local land use. But as a PSN, Food Estate was driven by the central government, sometimes overriding local plans. This recentralization clashed with Law No.23/2014, which affirms local say in spatial plans. In some cases, district governments protested that their spatial plans had not envisioned such large-scale conversion. The coordination among ministries has been unclear: e.g. the Coordinating Ministry of Economy provides guidelines, the Ministry of Agriculture runs farming, the Ministry of Public Works builds infrastructure, and MoEF is supposed to safeguard forests and environment. Such fragmentation has

led to overlapping or delayed permits. For instance, land acquisition permits under the Land Acquisition Law (UU No.2/2012) have been slow, and reports indicate some areas lacked formal land clearance certificates when clearing began.

In sum, the Food Estate implementation exposed legal fragmentation and enforcement issues: environmental and agrarian laws were applied inconsistently; ministerial rules were changed frequently; and regional autonomy was partly ignored. These gaps have allowed deforestation to proceed with little accountability. They also demonstrate a failure of the “public trust” concept (not formalized in Indonesian law but implicit in the Constitution): natural resources were not managed as a trust for all, but allocated to national projects without adequate transparency.

Ecological Justice and Environmental Rights

This section applies key legal and ethical concepts to the Food Estate policy. Ecological justice demands that development not only meet human needs but do so fairly and in harmony with nature. In Indonesia, the constitution’s environmental rights reflect this ethos. The explicit right to “a good and healthy environment” (Article 28H(1)) is a constitutional human right^[6]. Article 33 further integrates environmental preservation into economic planning^[9]. These provisions echo global principles (e.g. SDGs, human rights law) that interlink food security with healthy ecosystems.

The Food Estate’s implementation suggests these constitutional environmental rights have been compromised. Local communities were effectively denied the quality of environment previously enjoyed: deforestation and floods have directly harmed their living conditions^[19, 2]. The fairness dimension of ecological justice is also in question. For example, many cleared areas were actually designated (or had become de facto) social forestry areas intended for community use (e.g. Desa Tewai Baru’s land was allocated to social forestry since 2019)^[25], yet it was taken for the estate. Indigenous populations in Papua similarly report losing customary sago forest without consultation.

International law (e.g. UN Declaration on the Rights of Indigenous Peoples) and Indonesian constitutional guarantees (UUD 1945 Article 18B) require Free Prior Informed Consent for use of customary lands. These processes were largely absent in the Food Estate roll-out, violating both legal rights and justice norms.

The notion of public trust – that the government holds natural resources in trust for present and future generations – further illuminates the issue. Under this doctrine (while not codified, implicit in Articles 33 and 28H), the state must prioritize long-term environmental health over short-term gains. In practice, however, Food Estate planning prioritized crop targets and fiscal budgets. Budget documents show hundreds of billions of rupiah allocated for Food Estate infrastructure (e.g. PUPR funding for irrigation) despite ecological warnings^[26]. Ecologists argue that the project’s focus on food self-sufficiency neglected ecosystem sustainability. As one NGO statement warns, opening deep peatland is a “kecelakaan” (disaster) against local food systems^[27].

Environmental law also intersects with social rights to food and health. While Article 28H(1) implicitly includes clean environment as part of health rights, Article 28H(1) and international law also recognize a right to adequate food.

The government’s aim of food security is valid, but ecological justice requires that the means respect all rights. The Supreme Court has emphasized that a healthy environment is part of the substantive right to life. In a democratic society, achieving food security does not justify overriding environmental and tenure rights. The Food Estate’s outcomes – stunted harvests on poor soil and displaced farmers – suggest it may have undermined the very right to adequate food for local communities.

In conclusion, from an ecological justice perspective, the Food Estate program falls short. It has placed environmental burdens on some of the most vulnerable lands and peoples, with inadequate compensation or participation. Legally, this means conflicts with constitutional environmental rights and agrarian principles. Recognizing these violations, the state must realign policy to honor ecological justice: ensuring any future food projects are ecologically sound, locally inclusive, and rights-respecting.

Agrarian Law Principles and Constitutional Balance

Indonesia’s Agrarian Law (UU No. 5/1960) enshrines the doctrine that land and natural resources are under national control for common prosperity. It asserts that land rights come with obligations to use land in socially useful ways and prohibits arbitrary expropriation without compensation. The Food Estate policy uses state land power to reassign vast areas, ostensibly for national welfare. However, this raises questions under UUPA principles. For instance, traditional communities claim centuries-old rights to some of these lands, but formal title was not always clear. The government’s use of its expropriation powers (under land acquisition laws) must still respect the “social function” of land – including protecting community welfare and the environment.

In constitutional terms, the Food Estate engages Article 33(3), which declares that “Earth and water and the natural wealth [...] are controlled by the State and used for the greatest prosperity of the people.”^[16] the purpose clause (greatest prosperity of the people) suggests broad public benefits. Critics argue that selling off or converting forest to large-scale farming (often involving private corporations or state enterprises) does not clearly serve communal welfare, especially if local communities lose food resources or flood protection. The constitutional language also implies a duty of oversight: the state “controls” resources in trust. This was seemingly neglected as the Food Estate proceeded. In contrast, smaller-scale, community-based agricultural development (e.g. distributing 50 tons of local rice to villages during the pandemic) has proven successful in some regions^[28], aligning more closely with UUPA’s egalitarian intent.

Furthermore, principles of agrarian law demand legal certainty and proper regulation. The Food Estate’s changing regulatory regime – with permits, ministerial rules, and decrees in flux – undermines predictability. For example, forest ministerial rules were issued, then invalidated by administrative review, creating confusion about legality of land use. Under UUPA, authorities should coordinate spatial plans; yet the program often overrode district spatial plans. This may breach Law No.23/2014’s mandate of regional participation in land decisions.

In sum, from an agrarian law perspective, the Food Estate program appears to overreach state power without sufficient legal safeguards. It has prioritized national planning over

land tenure security and local autonomy. Addressing this requires reinforcing rule-of-law aspects: ensuring land acquisition follows legal procedure (including fair compensation per UU 2/2012), recognizing communal rights, and integrating food policy with national agrarian objectives as defined by law.

Institutional Responsibility and Enforcement Issues

The Food Estate’s fragmented implementation highlighted institutional and enforcement weaknesses. Several ministries and agencies share responsibility, leading to coordination challenges. The Ministry of Environment and Forestry (MoEF) technically oversees forest conversion and environmental permits; yet MoEF has been criticized for being sidelined in initial planning. The Ministry of Agriculture (MoA) drives the cultivation component, and local governments are tasked with permitting and supervising on the ground. In practice, this division of labor led to blurred accountability: e.g. if deforestation occurred illegally, did MoEF enforce penalties? Reports suggest enforcement has been limited by political pressure to proceed rapidly.

Local inspectors and courts have been similarly inert. There is little public record of AMDAL violations being prosecuted, nor of administrative sanctions under Law

32/2009. Part of the problem is that Food Estate was a “priority” program; officials may have been reluctant to clamp down. Moreover, environmental agencies at the provincial level often lack capacity to monitor such vast projects. The result is an “enforcement gap” – violations of environmental law go unchecked.

These issues reflect a systemic tension in Indonesia between development goals and rule of law. Legal scholars note that unless oversight is empowered (e.g. stronger parliamentary or judicial review of PSN projects), fast-track programs can escape accountability. Indeed, the Indonesian Parliament (DPR) has recently called for evaluating the Food Estate project in the 2020-24 PSN, citing overlapping budgets and unclear targets ^[29]. This suggests an emerging institutional response.

Overall, the institutional shortcomings underscore the need for clearer mandates and stronger checks. Suggested reforms include: designating a single lead agency for environmental compliance in each Food Estate site; requiring regular public reporting on environmental indicators; and empowering environmental courts or the Ombudsman to review grievances. Only with robust enforcement can the legal and moral mandates of environmental protection be upheld against political economic pressures.

Table 1. Relevant Laws and Regulations – Key Provisions

Law/Regulation	Relevant Provisions	Notes
1945 Constitution	Art. 28H (1): right to “good and healthy environment” ^[6] . Art. 33(3–4): State control of land/water for people’s welfare; economy must be environmentally sound ^[17] .	Basis for env’t and agrarian rights.
UU No.5/1960 (Agrarian Law)	Land has social function (Art.2); all “wahana hidup rakyat” under state control (Art.1) for common benefit.	Requires equitable land use, supports food security and

Table 2: Legal Gaps and Recommended Remedies Identified Legal Gap / Issue Recommended Legal Remedy or Reform

Law/Regulation	Relevant Provisions	Notes
		Welfare.
UU No.32/2009 (Environmental Protection)	Art.22: projects with significant impact must have AMDAL ^[3] . Mandates public participation, environmental quality standards, sanctions.	Framework for EIA, sustainability.
UU No.41/1999 (Forestry Law)	Forests classified as Protected/conservation/production; conversion of production forest allowed only by presidential decree (Art.14); protected areas off-limits.	Controls forest use.
UU No.26/2007 (Spatial Planning)	Requires national/regional spatial plans; forest areas to be demarcated and preserved.	Guides land allocation.
UU No.23/2014 (Regional Gov’t)	Decentralizes spatial/environmental planning to provinces/districts under national guidelines.	Local authority in land use.
Perpres No.3/2016	Lists Food Estate as National Strategic Project (PSN), enabling priority funding.	Gives project high priority.
Perpres No.109/2020	Amends Perpres 3/2016; retains Food Estate in PSN list; increases targeted PSN lands.	Updated PSN list.
Peraturan Menteri LHK No. P.24/2020	(No longer in force; rev’d in 2022) Allowed designation of up to 173,000 ha of forests as “Kawasan Hutan untuk Ketahanan Pangan (KHKP)” ^[30] for Food Estate.	Provided temporary forestuse scheme; now revoked.
Peraturan Menteri LHK No. 20/2025	Defines “Food Estate” activities (large-scale food production in forest area) ^[15] and establishes KHKP designation procedures.	New forestry regulation.
Permenko Perekonomian No.6/2024	Includes “Food Estate” in strategic national programs list; directs that projects be regulated by Perpres on Food Estate development ^[18] .	Signals forthcoming Perpres.
UU No.2/2012 (Land Acquisition)	Sets procedures for acquiring land for public projects, including land bank, compensation, and resettlement.	Governs food estate land procurement.

Deforestation & Peatland Strictly enforce existing forest conversion laws. Conversion. Large-scale clearing Restrict Food Estate to non-forest/degraded of peat/swamp forests for crops. lands.
 Require restoration offsets for any Violates env’t law and undermines cleared area.

Identified Legal Gap / Issue carbon sinks.	Recommended Legal Remedy or Reform
Incomplete AMDAL Process. Significant projects launched without transparent EIA approval.	Mandate completion of AMDAL prior to clearing. Require public disclosure of AMDAL reports. Strengthen sanctions for unauthorized deforestation (administrative or criminal penalties).
Unclear Regulatory Framework. Frequent changes in ministerial rules (e.g. P.24/2020 revoked) create uncertainty.	Enact a permanent implementing regulation (Perpres or Govt Regulation) on Food Estate with clear env't safeguards. Harmonize forestry and agrarian rules (e.g. specify forest "release" process for project).
Centralization vs Local Authority. Top-down PSN Authority conflicts with district spatial plans and permits.	Legally reinforce role of local govt in approving land use (in line with UU23/2014). Require multi-level coordination (e.g. joint central-local AMDAL commissions). Increase transparency by involving DPR and public hearings.
Community and Indigenous Rights. FPIC and adat rights overlooked; land taken without consent or proper consultation.	Guarantee Free, Prior and Informed Consent in law or regulation for Food Estate. Recognize adat land rights in agrarian law and include benefit-sharing clauses (e.g. share of yields, jobs).
Monitoring and Enforcement Weakness. Lack of follow-through on env't standards; weak compliance checks.	Strengthen environmental judiciary (e.g. specialized courts, citizen suits). Institute regular oversight (e.g. Parliament audit, independent watchdog). Empower MoEF with resources to inspect PSN projects.
Narrow Crop Focus & Sustainability. Emphasis on export crops (cassava, sugar) risks monoculture & ignores local food needs.	Integrate sustainable development criteria: promote multi-cropping, agroforestry in estates. Align crop selection with regional needs (per Article 33). Support small-scale farmers and local food systems as alternatives ^[22] .

Conclusion

This analysis finds that Indonesia's Food Estate policy, while motivated by legitimate food security goals, has clashed with core environmental law and justice principles. The empirical and legal evidence shows a governance gap: significant forest and peatland areas were repurposed under a top-down program without full adherence to environmental safeguards. Constitutional rights to a healthy environment (Art. 28H/28I) and sustainable resource use (Art. 33) have been undermined by deforestation, peat damage, and social exclusion ^[6, 1]. Key legal requirements – notably the AMDAL process – have been inadequately implemented ^[3, 4], and regulatory confusion (revoked Permen, overlapping authority) left enforcement weak. As a result, local communities have borne environmental harms (floods, soil degradation) without commensurate benefits or participation, violating ecological justice and human rights. Despite government intentions, the Food Estate has not fully aligned with Indonesia's environmental mandate. To correct course, legal reform is needed. We recommend: (1) Strengthen AMDAL and permitting – enforce Law 32/2009 rigorously for all Food Estate sites, with mandatory public consultation; (2) Restrict site selection to degraded lands outside primary forests and deep peat (consistent with forestry law); (3) Secure land rights and participation – require FPIC from indigenous and local communities and recognize their resource entitlements; (4) Clarify legal framework – issue a specific implementing regulation (Perpres or Government Reg.) for Food Estate that embeds sustainability criteria; and (5) Enhance oversight – empower parliament, courts, and civil society to monitor PSN projects. These measures align the Food Estate with constitutional values (environmental protection, social welfare) and with ecological justice theory, which demands that development projects do not redistribute environmental burdens onto the least powerful.

By adopting these legal and policy remedies, Indonesia can reconcile its food security ambitions with its constitutional promise of a healthy environment and socially just agrarian governance. This will help ensure that national food production grows in a way that is ecologically sustainable and respects the rights of all Indonesians.

Recommendations

- **Ensure Complete Environmental Review:** Mandate that any Food Estate area cannot be developed until its AMDAL is fully approved. Publish all AMDAL reports and decisions publicly. Strengthen penalties (administrative and criminal) for illegal clearing without AMDAL compliance ^[3, 4].
- **Prioritize Non-Forest Lands:** Adopt a legal rule (through MoEF or Perpres) that Food Estate developments be sited only on already-cleared or degraded lands. Explicitly prohibit conversion of primary forests or deep peat. Revise Permenhut Reg.20/2025 to tighten criteria for KHKP designation (e.g. exclude critical habitats).
- **Formalize Community Consent:** Update regulations to require Free Prior and Informed Consent (FPIC) by affected customary communities before any project starts. Provide legal recognition of customary land claims under agrarian law, and ensure just compensation or benefit-sharing if land is used. Involve local governments and village councils in planning per UU 23/2014 to uphold decentralization.
- **Reform Legal Framework:** Enact a government regulation or ministerial decree that clearly governs the Food Estate program, integrating environmental impact limits and social safeguards. Clarify which national rules (Presidential or ministerial) apply to each phase (land preparation, planting, processing). Ensure consistency between agricultural policy and forestry/spatial laws.
- **Strengthen Monitoring and Enforcement:** Establish an independent oversight body (including civil society) to track Food Estate outcomes (deforestation, yields, social impacts). Allocate resources to MoEF and regional environmental agencies for field inspections. Encourage use of citizen lawsuits or ombudsman appeals to address grievances.
- **Promote Local Food Sovereignty:** Complement or replace large estates with support for decentralized, community-based agriculture. Provide funding and

technical aid to village cooperatives and smallholder farms that enhance local food access without sacrificing forests. Emphasize crop diversification and agroecological methods to align with sustainable development goals.

Authors' Contributions

Andi Haruman led the conceptualization of the study, conducted the legal analysis, gathered and synthesized data (laws, regulations, reports), and drafted the manuscript. Dr. Bambang Slamet Riyadi contributed to the theoretical framework (environmental rights, agrarian law) and wrote sections on legal principles and policy context. Dr. Riza Zulfikar supervised the research, critically revised the analysis, and provided expertise on Indonesian constitutional law and agrarian regulations. All authors reviewed the findings, contributed to discussions of ecological justice and rights, and approved the final manuscript.

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