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Legal Implications of Downstreaming on Land Rights Acquisition for Public Interest in Justice Based Industrialization

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ABSTRACT

Downstreaming as a national industrialization strategy has shifted the orientation of natural resource utilization from exporting raw materials to creating added value domestically. This policy encourages the development of industrial estates, smelters, and strategic infrastructure that require large-scale, integrated land availability. Consequently, significant changes in land function and control have arisen, raising legal issues related to land rights protection, legal certainty, and agrarian justice. This study aims to analyze the legal implications of downstreaming policies on land acquisition for the public interest within a justice-based industrialization framework. The method used is socio-legal research with a qualitative approach and prescriptive legal reasoning to examine the relationship between industrialization policies and land rights protection. The results show that expanding the definition of "public interest" through regulatory changes, particularly after the enactment of the Job Creation Law, has strengthened state legitimacy in land acquisition for downstreaming projects. These changes have accelerated the land acquisition process through consignment mechanisms, simplified permitting processes, and institutional support such as the Land Bank. However, this acceleration has the potential to weaken the bargaining position of communities and increase the risk of agrarian conflict and marginalization of vulnerable groups. Therefore, a harmonious, participatory, and substantive justice-oriented land law is needed to ensure that downstream-based industrialization remains in line with the principle of land rights protection.

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Introduction

Downstreaming is the process of processing raw materials into value-added products. Downstreaming is an industrial development process focused on processing natural resources into products with high added value Asmy et al., 2024). The obligation for downstreaming in Indonesia began in 2014, under the legal umbrella of Law No. 4 of 2009 concerning Mineral and Coal Mining, Law No. 3 of 2020 concerning Amendments to Law No. 4 of 2009 concerning Mineral and Coal Mining, and Government Regulation No. 32 of 2014 concerning the Masterplan for the Acceleration and Expansion of Indonesian Economic Development (MP3EI). The MP3EI economic zone covers Sumatra, Java, Kalimantan, Sulawesi, Bali-Nusa Tenggara, and Papua-Maluku Islands. This downstreaming has subsequently expanded across all industrial sectors in Indonesia (Rifa'i, 2025).

Downstreaming and industrialization are strategic national policies that drive significant changes in land use and ownership patterns. The development of industrial estates, smelters, and other downstream facilities requires extensive land, which in practice often overlaps with agricultural land, community land, and areas with complex land rights. These changes in land use raise serious legal issues, particularly regarding the protection of land rights, legal certainty, and agrarian justice (Warburton, 2024). In this context, land law faces the challenge of balancing the interests of industrial development with the protection of the rights of legal subjects to land. A weak normative framework and regulatory disharmony have the potential to exacerbate agrarian conflicts and marginalize community groups directly impacted by downstream and industrialization projects (Kantaros et al., 2025).

Protecting land rights for industrial purposes is crucial because it can lead to:

a) Land change or acquisition:
Infrastructure and industrial development often require large areas of land, leading to land acquisition from local communities;
b) Agrarian conflict:
Downstreaming can trigger agrarian conflicts between local communities and the government or companies seeking to expand their operations.
c) Environmental damage.
Industrial development can cause environmental damage, which has consequences for local communities' land rights and natural resources in the community environment (Agegnehu, 2023).

Based on this background, this study aims to comprehensively analyze the legal implications of the downstreaming policy in the industrialization process on land acquisition for public interest in the Indonesian land law system. This study also aims to examine the relationship between the industrial downstreaming policy and land acquisition mechanisms, including changes in the function and pattern of land ownership due to downstreaming-based industrial development. Furthermore, this study seeks to formulate a land law construction that can provide fair protection, guarantee legal certainty, and prevent agrarian conflicts amidst increasing industrialization pressures, so that the principle of justice in development can be maintained.

Literature Review

Land Rights

Land rights are land ownership rights that contain a series of authorities, obligations, and/or prohibitions for the rights holder to act on the land to which they are entitled. The permitted, obligatory, or prohibited actions constitute the content of these ownership rights, which serve as the criteria or benchmark for land ownership rights regulated in the Land Law (Firmanda et al., 2023).

With the State's ownership rights, as stated in Article 2 paragraph (1) of the UUPA, namely: "Based on the provisions of Article 33 paragraph (3) of the 1945 Constitution and matters referred to in Article 1, the earth, water, and airspace, including the natural resources contained therein, are controlled at the highest level by the State as the organization of power for all of society" (Erwiningsih, 2023).

Based on these provisions, the State has the authority to determine land rights owned by and/or granted to individuals or legal entities that meet the specified requirements. This authority is regulated in Article 4 paragraphs (1) and (2) of the UUPA.

In paragraph (1): "Based on the State's right to control as referred to in Article 2, it is determined that there are various rights to the surface of the earth, called land, which can be given to and owned by people either alone or together with other people and legal entities."

In paragraph (2): "The rights to land referred to in paragraph (1) of this Article provide the authority to use the land in question as well as the earth and water bodies and the space above them only as needed for interests directly related to the use of the land, within the limits according to this law and other higher legal regulations" (Meckelburg & Wardana, 2024)

Based on this Article, the State determines land rights as regulated in Article 16 paragraph (1) of the UUPA, namely: a. Ownership Rights; b. Cultivation Rights; c. Building Rights; d. Usage Rights; e. Lease Rights; f. Land Clearing Rights; g. Forest Product Collection Rights.

Other rights not included in the rights mentioned above will be determined by law, as well as temporary rights as referred to in Article 53. The temporary land rights mentioned above are further regulated in Article 53 paragraph (1), namely: "Temporary rights as referred to in Article 16 paragraph (1) letter h, namely Mortgage Rights, Profit Sharing Business Rights, Elevating Rights and Agricultural Land Lease Rights are regulated to limit their characteristics that are contrary to this law and these rights are attempted to be eliminated within a short time" (Widiyono, 2022).

A person or legal entity who has a right to land is burdened by the UUPA with the obligation to work or actively manage it themselves and is also obliged to maintain it, including increasing fertility and preventing damage to the land. The parties who can have rights to land are regulated in Article 9 paragraph (2) of the UUPA, namely: "Every Indonesian citizen, both men and women, has the same opportunity to obtain a right to land to obtain benefits and results, both for themselves and their families."

Foreign citizens or foreign legal entities with representatives in Indonesia are strictly limited to only using rights or lease rights. This is stipulated in Articles 42 and 45 of the Basic Agrarian Law. Legal entities established under Indonesian law and domiciled in Indonesia can have all land rights except ownership rights, which are limited to legal entities designated by the government, as stipulated in Article 30 paragraph (1) letter b and Article 36 paragraph (1) letter b of the Basic Agrarian Law.

Land rights can be divided into two categories: Permanent Land Rights and Temporary Land Rights.

a) Permanent Land Rights
   1) Ownership Rights
      These rights have several special features, including: unlimited duration (continuous), inheritability, and the strongest and most complete right. According to Article 20 of the Basic Agrarian Law, ownership rights are hereditary, the strongest and most complete rights that a person can have over land, and they have a social function (Stone & Hasan, 2022).
   2) Cultivation Rights
      Based on Article 28 of the UUPA, Cultivation Rights are the right to carry out agricultural activities (plantations, animal husbandry, fisheries) on state land for a maximum of 25 years. This right can be transferred to another party, and only Indonesian citizens or Indonesian legal entities can have it (Pelawi & Lubis, 2025).
   3) Building Use Rights
      Based on Article 30 UUPA, Building Use Rights are the right to construct buildings on State land for a period of 30 years and can be extended for a maximum of 25 years; they can be transferred to other parties, and only Indonesian citizens/Indonesian legal entities can own them (Susilawati, 2024).
   4) Usage Rights
      Based on Article 41 of the UUPA, the right to use and/or collect proceeds from land controlled directly by the State or land owned by other people (Istiqomah et al., 2024).
   5) Rental Rights
      Rental rights are rights that give authority to use land belonging to another person by paying the owner a certain amount of money as rent.

b) Temporary Land Rights
   1) Mortgage Rights
      A mortgage right is the transfer of land for a sum of money, with the condition that the person transferring the land has the right to reclaim the land for an equal sum of money (Masturi & Herlan, 2025).
   2) Profit-Sharing Business Rights
      A profit-sharing business right is the right of an individual or legal entity to cultivate another person's agricultural land with the agreement that the proceeds will be shared between the two parties according to a previously agreed-upon agreement (Syah & Rahmadani, 2024).
   3) Agricultural Land Lease Rights
      An agricultural land lease right is the transfer of agricultural land to another party who pays a sum of money to the landowner, with the agreement that after the party providing the money has held the land for a specified period, the land will be returned to the owner (Onofri et al., 2023).
   4) Right of Occupation

A right of occupancy is the right that authorizes a person to build and occupy a house on another person's land. The holder of a right of occupancy is not obligated to pay anything to the landowner; the legal relationship with the land is very weak, meaning that the landowner can terminate it at any time if the person needs the land themselves. The right to ride is exercised only on homestead land and not on agricultural land (Bevan, 2023).

Land Acquisition for Public Interest

The term land acquisition can be seen in Article 1, point 2 of Law Number 2 of 2012 concerning Land Acquisition for Development in the Public Interest, which states: "Land Acquisition is the activity of providing land by providing adequate and fair compensation to entitled parties."

The definition of land acquisition is further regulated in Article 1, point 2 of Presidential Regulation Number 71 of 2012 concerning the Implementation of Land Acquisition for Development in the Public Interest: "Land Acquisition is the activity of providing land by providing adequate and fair compensation to entitled parties" (Widiyono & Khan, 2023).

Therefore, it can be concluded that land acquisition is the act of relinquishing land rights by providing compensation, the use of which must be for the public interest. According to Boedi Harsono, land acquisition is a legal act that relinquishes the legal relationship that originally existed between the rights holder and the land they require, by providing compensation in the form of money, facilities, or other means, through deliberation to reach an agreement between the land owner and the party requiring it (Sari et al., 2022). According to Gunanegara, land acquisition is the voluntary relinquishment of ownership rights to land and/or objects on it for the public interest.

Based on the definition above, land acquisition consists of the following elements:

a) A legal act in the form of relinquishing land rights to become state land;
b) Relinquishing land rights for the public interest;
c) A legal act based on deliberation and voluntary agreement;
d) Accompanied by fair and adequate compensation (Tehupeiory et al., 2024).

Land acquisition is a legal act undertaken by the government to acquire land for specific purposes by providing compensation to land owners (either individuals or legal entities) according to certain procedures and nominal amounts. This rationale is due to the limited availability of land for development, namely land controlled by the state (government) as per Articles 2 and 4 of the UUPA (Dagbanja, 2023).

The basic concept of land acquisition through the release or transfer of land rights is carried out through deliberation based on an agreement between the two parties: the landowner and the government, as the party requiring it.

The government's land acquisition activities for development are aimed at fulfilling the public interest. The public interest is organized to achieve the greatest possible prosperity for the people. The term "public interest" is regulated in Article 1, point 6 of Law Number 2 of 2012 concerning Land Acquisition for Development in the Public Interest: "Public interest is the interest of the nation, state, and society, which must be realized by the government and utilized to the greatest extent for the prosperity of the people" (Roestamy et al., 2022).

The definition of public interest is regulated in Article 1, point 6 of Presidential Regulation Number 71 of 2012 concerning the Implementation of Land Acquisition for Development in the Public Interest: "Public interest is the interest of the nation, state, and society, which must be realized by the government and utilized to the greatest extent for the prosperity of the people."

Several legal experts have provided definitions that effectively explain the concept of public interest. According to Pound, public interest is the interests of the state as a legal entity and safeguards the interests of society. According to Julius Stone, public interest is a balance between the interests of individuals, society, the authorities, and the state (Barnett et al., 2022).

The definition of public interest is limited to development interests that are not for commercial purposes. Therefore, it can be concluded that what is meant by public interest is an interest that must benefit society as a whole.

Types of development in the public interest, based on Article 10 of Law Number 2 of 2012 concerning Land Acquisition for Development in the Public Interest, are: Land for the public interest, as referred to in Article 4 paragraph (1), is used for the construction of:

a) National defense and security;

b) Public roads, toll roads, tunnels, railway lines, railway stations, and railway operating facilities;
c) Reservoirs, dams, bends, irrigation, drinking water channels, drainage and sanitation channels, and other irrigation structures;
d) Ports, airports, and terminals;
e) Oil, gas, and geothermal infrastructure;
f) Electricity generation, transmission, substations, networks, and distribution;
g) Government telecommunications and informatics networks;
h) Waste disposal and processing facilities;
i) Government/Regional Government hospitals;
j) Public safety facilities;
k) Government/Regional Government public cemeteries;
l) Social facilities, public facilities, and public green open spaces;
m) Nature reserves and cultural heritage;
n) Offices;
o) Government/Regional Government/village offices;
p) Urban slum settlement development and/or land consolidation, as well as low-income rental housing;
q) Government/Regional Government educational or school infrastructure;
r) Government/Regional Government sports infrastructure;
s) Public markets and public parking lots.

Land acquisition in the form of a release of rights or land acquisition essentially complies with applicable legal principles. This is intended to prevent state officials from engaging in deviant practices. These legal principles include:

a) Principle of Agreement
All land acquisition activities, particularly those involving the release of land rights, and all related legal aspects, such as compensation price, form of compensation, resettlement, socio-economic conditions, and other matters, must be based on the principle of agreement between the parties requiring the land and the land rights holder. This agreement is based on the agreement of both parties' wishes, without any element of coercion or deception, and is carried out in good faith (Chilonga et al., 2026).
b) Principle of Justice
In land acquisition, the principle of justice is laid down as the basis for determining the form and amount of compensation to be provided to landowners and individuals related to land whose rights are revoked or released for the public interest (Ti, 2022).
The application of the principle of justice in land acquisition regulations requires that communities affected by development must receive compensation that restores their socio-economic conditions to at least the same level as before the release or revocation of land rights (Gebeyehu & Kidie, 2026).
c) Principle of Benefit
The release or revocation of land rights must, in principle, provide benefits to those who need the land and the community whose land rights are being released or revoked (Diantoro, 2025).
d) Principle of Legal Certainty
The implementation of land acquisition must comply with the principle of legal certainty, namely, it must be carried out in a manner stipulated in applicable laws and regulations, where all parties are fully aware of their respective rights and obligations. Legal certainty must also be directed towards providing compensation to landowners (Faruq & Hariri, 2023).
e) Principle of Deliberation
Deliberation is conducted to reach an agreement between the two parties in the implementation of land acquisition for the public interest. An essential element of deliberation is a unity of opinion between the two parties regarding a particular issue. The wishes of each citizen are an integral part of this unity of opinion (Hendriks & Wagenaar, 2023).
The result of deliberation is a mutual agreement between all landowners and those requiring land. Deliberation is conducted to reach an agreement on compensation, payment mechanisms, and the

release of land rights. Deliberations to reach a mutual agreement must also avoid elements of deception, misrepresentation, and/or coercion (Gorgan & Bavorova, 2022).

f) Principle of Transparency
Land acquisition regulations must be communicated to the public so that they are aware of the regulations' contents. This is intended to prevent any party from feeling disadvantaged or from lying, thereby preventing errors that could lead to conflict (Wang & Li, 2025).

g) Principle of Participation
The active participation of all parties involved in the process of releasing or revoking land rights fosters a sense of ownership and minimizes the likelihood of rejection of the release or revocation of land rights (Zhou et al., 2024).

h) Principle of Equality
This principle is intended to position the parties needing land and the parties whose land rights are being relinquished on an equal footing throughout the land acquisition process. With equal standing between landowners, land acquisition is expected to be successful because each party can express their desires and submit offers in accordance with their equal standing (De Maria et al., 2023).

i) Principle of Minimizing Impacts and Sustaining Economic Welfare
Land acquisition is carried out with efforts to minimize any negative or significant impacts that may arise from the development activity. Efforts must also be made to improve the standard of living of the community affected by the development project or whose land rights are being relinquished (Duong et al., 2023).
The economic welfare of the community affected by the development project must be at least the same as before the land acquisition. If necessary, there should be an increase in the community's standard of living before and after the development project. There should be no decline in the community's quality of life and welfare (Syaban & Appiah-Opoku, 2024).

Method

The research method used in this study is the socio-legal research method, namely a legal research approach that not only examines legal norms textually, but also examines how the law works, is applied, and impacts social reality. This approach views law as a system that does not stand alone, but is influenced by social, economic, political factors, and development policies, including the dynamics of industrialization and downstreaming in Indonesia. Thus, this study does not solely focus on the analysis of laws and regulations governing land acquisition and industrial downstreaming, but also considers the context of implementation, power relations, and their potential impact on the community as legal subjects holding land rights. The socio-legal approach in this study is used to critically examine the relationship between the downstreaming policy as a national industrialization strategy and the land law system, particularly in land acquisition for the public interest. The research data were analyzed qualitatively using prescriptive legal reasoning, namely an analytical method that not only describes normative and empirical conditions, but also formulates legal arguments regarding how the law should be constructed and applied. Through this analysis, this study seeks to uncover the relationship between industrialization policies and the protection of land rights, while also assessing the extent to which the existing legal framework is able to guarantee legal certainty, justice, and prevent agrarian conflicts amidst the acceleration of downstream-based development.

Results and Discussion

1. The Relationship Between Industrial Downstreaming and Land Acquisition for Public Interest

Figure 1 illustrates the conceptual relationship between downstreaming policy, land acquisition mechanisms, and their legal and social implications. The framework demonstrates how the expansion of industrial downstreaming policies increases land demand, which subsequently activates legal land acquisition mechanisms and generates various socio-legal impacts that require a justice-based land law framework.

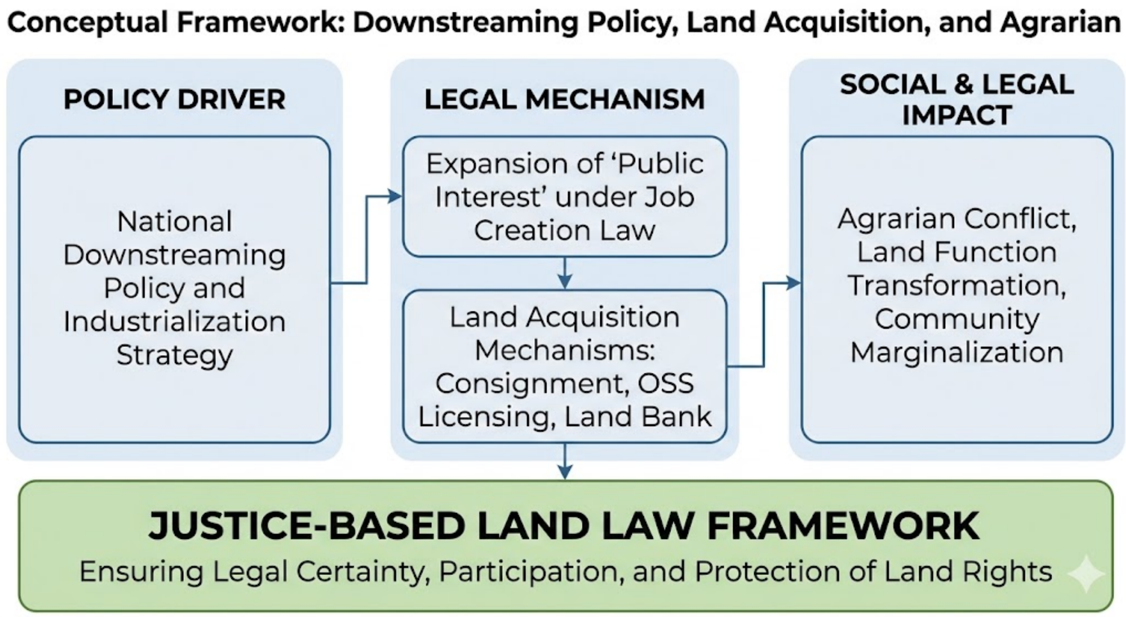

Figure 1. Downstreaming Policy, Land Acquisition, and Agrarian

The relationship between industrial downstreaming and land acquisition for public interest is a crucial aspect of the dynamics of industrialization-based national development. Downstreaming policies that encourage the development of smelters, industrial estates, and other supporting infrastructure directly increase the need for large-scale, integrated land availability (Song et al., 2025). In this context, the land acquisition mechanism serves as a legal instrument that determines how industrial development interests can align with the protection of community land rights. Therefore, it is crucial to examine the normative and implementative linkages between downstreaming policies and the land acquisition system to ensure legal certainty and agrarian justice.

a) Changes to the Regulations of Law No. 2 of 2012, with the existence of Law No. 11 of 2020, in conjunction with Law No. 6 of 2023 concerning Job Creation

Regulations regarding the acquisition of land rights for development in the public interest have been amended by the government several times, as the government strives to respect, protect, and balance the interests of individual landowners with those of the government, thus achieving a balance between government and individual interests. Some of these regulations include: Law Number 20 of 1961 concerning the Revocation of Rights to Land and Objects Thereon, a regulation that authorizes the government to revoke land ownership rights because, in the interests of the nation, state, and society, the land is designated or used for development.

Compensation is stated to be provided appropriately in Article 6, which states, "compensation commensurate with the granting of rights." Appropriate compensation is based on the actual value, which is certainly not the same as the general price, and is determined by the government upon the recommendation of an appraisal committee. Then several laws and regulations were issued under the Law related to "procurement of land rights for development in the public interest", namely: Regulation of the Minister of Home Affairs Number 15 of 1975 concerning Provisions Concerning Procedures for Land Procurement, Presidential Instruction Number 9 of 1973 concerning Implementation of Revocation of Rights to Land and Objects Thereon, Presidential Decree Number 55 of 1993 concerning Procurement of Land Rights for Development in the Public Interest, Presidential Regulation Number 36 of 2005 and Presidential Regulation Number 36 of 2005 and Presidential Regulation Number 65 of 2006 concerning Land Procurement for Implementation of Development in the Public Interest and finally Law Number 2 of 2012 concerning Land Procurement for Development in the Public Interest which is still in effect until now along with PP 71 of 2012 its implementing regulations have also changed several times.

Job Creation Law No. 11 of 2020, amended by Law No. 6 of 2023, has amended several provisions contained in Law No. 2 of 2012 concerning Land Acquisition for Development, including:

1) The Job Creation Law amends it by adding 6 (six) categories of "public interest" included in the acquisition of land rights for development, regarding: 1. Upstream and downstream oil and gas industrial areas; 2. Special economic zones; 3. Industrial areas; 4. Tourism areas; 5. Food security areas; 6. Technology development areas.
2) Regarding the time period for determining the location as stipulated in Article 10 paragraph (1) letter a of Law No. 2 of 20212 concerning Land Acquisition for Development in the Public Interest, which is valid for 2 (two) years from its enactment, amended in the Stipulation of Government Regulation instead of Law No. 2 of 2022 concerning Job Creation to Become a Law (amended again by Law No. 6 of 2023). According to the new regulation, the location determination period has been extended to three years and can be extended for one year.
3) Small-scale land changes, particularly for land areas of less than five hectares. According to Law No. 2/2012, there are no specific provisions regarding small-scale land acquisition. However, the Job Creation Law (Law No. 2/2022 and Law No. 6/2023) streamlines the land acquisition process, eliminating the need for requirements from the Regional Head. These requirements include:
   a) Conformity to Spatial Utilization Activities (KKPR)
   b) Technical Considerations
   c) Environmental Impact Analysis (AMDAL)
   d) Land Use Outside Forest Areas and Abandoned Land Areas
   e) Land Use Outside Peatland/Coastal Border Areas.

b) Land Acquisition for Industry.
   1) Definition of "Public Interest"
      Changes to the Law's conceptual framework, including an expanded definition, have shifted the meaning of "public interest" from basic infrastructure and purely public services, such as defense, public roads, toll roads, reservoirs, transmission lines, government hospitals, government offices, and so on (there are 18 categories). According to the Job Creation Law (Law No. 6/2023 and Government Regulation No. 19/2021), there are 24 types of activities encompassing strategic economic/commercial infrastructure areas: 1. Downstream industrial areas, including oil and gas, industry (upstream and downstream), 2. Special Economic Zones (SEZs), 3. Industrial Estates, 4. Tourism Areas, and 5. Food Security Areas.
   2) Status of Downstream Projects (Smelters/Factories).
      a) In Law No. 2 of 2012, factories or industrial areas are considered commercial/business interests.
         According to the Job Creation Law (Law No. 6/2023 and Government Regulation No. 19/2021), downstream projects (such as Nickel Smelters and Petrochemical Plants) within Industrial Estates or Special Economic Zones (KEK) are now categorized as "Public Interest."
      b) Law No. 2 of 2012 stipulates that land acquisition must be conducted through Business-to-Business (B2B) transactions or direct sales with landowners. The state cannot force individuals to sell their land.
         According to the Job Creation Law (Law No. 6/2023 and Government Regulation No. 19/2021), the state can exercise its authority to acquire land through legal land acquisition mechanisms (including consignment in court).
   3) Private sector involvement.
      According to Law No. 2 of 2012, the private sector must acquire land independently, while the state is only involved if the project is purely a government project (roads, dams).
      According to the Job Creation Law (Law No. 6/2023 and Government Regulation No. 19/2021), private sector owners holding permits (National Strategy projects) or managers of Special Economic Zones (KEK)/Industrial Zones can have their land acquired by the government through a land acquisition mechanism for the public interest. If deliberation fails and residents reject the project, compensation can be deposited with the District Court (Consignment).
   4) Resolving Obstacles (Resident Rejection)

According to Law No. 2 of 2012, if residents reject the price during the Business for Business process, the project can stall completely, requiring an alternative location or market mechanism.

According to the Job Creation Law (Law No. 6/2023 and Government Regulation No. 19/2021),

a) If deliberation fails and residents reject the compensation determined by the appraiser, the compensation money can be deposited with the District Court (Consignment).
b) Once the money is deposited, land rights are legally transferred to the state or agency requiring the land, and development can proceed (Article 42).

5) Ease of Licensing (Spatial Planning Compliance)

According to Law No. 2 of 2012, the Regional Spatial Planning (RTRW) adjustment process is often lengthy and rigid.

According to the Job Creation Law (Law No. 6/2023 and Government Regulation No. 19/2021), the Spatial Utilization Activity Compliance (KKPR) feature, a more flexible and integrated replacement for location permits, through the OSS system, accelerates location determination for priority industries.

The Online Single Submission (OSS) system, an electronically integrated business licensing system, simplifies business processes for permits from various ministries/agencies and regional governments through a single online platform. One of the outputs is a Business Identification Number (NIB), also known as the Risk-Based Business Licensing System (OSS RBA).

In relation to the National Strategy Program through downstreaming, the State Asset Management Institution plays a role in funding land acquisition, thus establishing a Land Bank Institution to collect unused state land assets. According to the Job Creation Law (Law No. 6/2023 and Government Regulation No. 19/2021), it serves as the legal basis or legal umbrella for the development of the Industrialization Downstream economy due to the need for extensive land. Industrialization Downstreaming requires land expansion facilitated by the government through changes to land acquisition regulations for the public interest. Land acquisition for public interest will clash with the factual social reality on the ground, resulting in the loss of living space/livelihoods for local communities who originally lived in the area. The Job Creation Law (Law No. 6/2023 and Government Regulation No. 19/2021) provides a mode to accelerate the land acquisition process for downstreaming investors who often ignore the equal deliberation process (Bachmann et al., 2024). The principle of justice for the original owners (indigenous communities and original land owners) and newcomer land grabbers, namely investors, is no longer taken into account, under the pretext of public interest, development interests, and the interests of the nation and state.

2. Changes in Land Function and Ownership Due to Downstream Industrial Development

Changes in land use and ownership resulting from downstream-based industrial development are a logical consequence of accelerated industrialization, which places natural resources as the primary basis for national economic growth. Downstreaming, involving large companies, both national and multinational, is projected to have positive impacts in the form of increased product added value, new job creation, strengthening the national industrial structure, and increased state revenue through taxes, royalties, and export foreign exchange (Meng et al., 2024). The development of smelters, integrated industrial areas, and other supporting infrastructure also encourages the growth of new economic centers in various regions, which theoretically can accelerate equitable development and reduce regional disparities. This transformation marks a shift in economic orientation from mere exploitation of raw materials to more complex and competitive industrialization.

However, despite these potential benefits, downstream-based industrial development also has significant negative impacts on land use and ownership. Large-scale land conversion, particularly in the mining and plantation sectors, often results in the reduction of forest areas, productive agricultural land, and living space for local communities. Deforestation caused by land clearing for nickel mining, for example, not only results in the loss of forest cover but also triggers water pollution, soil degradation, and air pollution due to intensive industrial activities. This environmental damage directly and indirectly impacts the sustainability of community land rights, as the land no longer has adequate ecological quality to support their traditional livelihoods and economic activities.

The social impact of this change in land function cannot be ignored either. Downstream processing through large-scale industrial expansion often triggers agrarian conflicts between communities, companies, and the government. Data shows that agrarian conflicts in Indonesia increased by 21% in 2024 compared to the previous year, with 295 cases spread across 34 provinces. Conflicts in the plantation sector ranked highest with 111 cases, the majority of which were caused by the expansion of oil palm plantations (75 cases). These conflicts impacted 64,436 families in 349 villages, with an affected land area of approximately 1.1 million hectares. The impact of these agrarian conflicts is felt not only by farmers, the most frequently involved group, in 173 cases, but also by the urban poor in 56 cases, indigenous communities in 53 cases, and fishermen in 13 cases. These figures demonstrate that changes in land ownership due to industrialization are not merely administrative or formal, but also directly impact the social dimension and the livelihoods of vulnerable groups.

In terms of causes, the majority of agrarian conflicts were triggered by the involvement of private business entities, recorded in 181 cases, including 108 cases related to illegal practices and 21 cases involving land mafias. This phenomenon reflects structural problems in land governance, ranging from overlapping permits, weak oversight, to abuse of authority in the process of land acquisition and transfer. In the context of downstreaming, the rapid and extensive demand for land often drives accelerated procedures that potentially disregard the principles of prudence, community participation, and respect for traditional rights (Torrente-Murciano et al., 2024).

Thus, changes in land function and ownership resulting from downstreaming-based industrial development not only bring economic transformation but also give rise to complex legal and social implications. Land is no longer viewed simply as a factor of production, but as a living space with social, cultural, and ecological dimensions. If these changes are not balanced by a strong, transparent, and equitable land law system, downstreaming-based industrialization has the potential to deepen inequality in land ownership and expand agrarian conflicts. Therefore, it is necessary to strengthen regulations, harmonize policies, and implement effective legal protection mechanisms so that the transformation of land functions within the downstreaming framework remains in line with the principles of social justice and environmental sustainability.

3. Land Law Construction in Protecting Land Rights Amidst the Pressure of Industrialization

The construction of land law to protect land rights amidst the pressures of industrialization is a central issue determining the direction of sustainable national development. In the context of downstreaming, which is driving the accelerated development of industrial areas, smelters, and other strategic infrastructure, land law is required to function not only as an instrument of legitimizing land ownership for development purposes but also as a mechanism for protecting community rights (Nhamo et al., 2022). In the Indonesian legal system, land is not merely viewed as an economic commodity; it also has a social dimension, as affirmed in Article 33 paragraph (3) of the 1945 Constitution of the Republic of Indonesia, which states that the land, water, and natural resources contained therein are controlled by the state and used for the greatest prosperity of the people. This constitutional principle serves as a normative basis for ensuring that every industrialization policy, including downstreaming, must not neglect the goals of social justice and the protection of land rights.

Within the positive legal framework, Law Number 5 of 1960 concerning Basic Agrarian Regulations (UUPA) affirms that land rights have a social function. This means that land use must not conflict with the public interest, but at the same time, the state is also obliged to guarantee legal certainty and protection for rights holders. Amidst the pressures of industrialization, the principle of land's social function is often interpreted dominantly to justify land acquisition or conversion for industrial development. However, social function is not synonymous with unilateral sacrifice by the community, but rather must be interpreted as a balance between the public interest and individual rights. Therefore, the construction of land law needs to reaffirm the limits of state intervention to prevent abuse of authority in the land acquisition process.

Land acquisition for public purposes is currently regulated by Law Number 2 of 2012 concerning Land Acquisition for Development in the Public Interest and its implementing regulations. This regulation provides a procedural framework covering the planning, preparation, implementation, and handover stages, including a mechanism for appropriate and fair compensation. However, in practice, the acceleration of national strategic projects and the development of downstream-based industries often create tensions between normative procedures and the interests of accelerating investment. This is where the construction of land law is tested: whether the mechanisms for deliberation, independent assessment, and compensation are truly implemented transparently and participatory, or whether they become administrative formalities that do not fully protect the rights of affected communities.

Furthermore, overlapping regulations between the land, forestry, mining, and investment sectors complicate the protection of land rights. In the context of downstream mining, for example, the granting of mining business permits and industrial location permits often occurs on land already de facto controlled or utilized by communities, including indigenous communities. The lack of synchronization between spatial planning maps, concession permits, and land data opens the door to agrarian conflicts. Therefore, future land law development must focus on regulatory harmonization and the integration of accurate land information systems to prevent overlapping claims and strengthen legal certainty.

Protection of land rights must also include recognition of communal and indigenous rights. Constitutional Court Decision No. 35/PUU-X/2012, which affirmed that customary forests are no longer state forests, was a significant milestone in strengthening the recognition of indigenous peoples' rights to their territories. In the context of downstream industrialization, this recognition should be a primary consideration before granting permits or implementing land acquisition. Without adequate recognition and protection, industrial development has the potential to erode the living space of indigenous communities and deepen structural inequalities in land ownership.

Furthermore, the construction of land law that is responsive to the pressures of industrialization must prioritize the principle of substantive justice. Justice is not only measured by the fulfillment of formal procedures or the amount of compensation, but also by the extent to which affected communities achieve sustainable livelihoods after their land is transferred (You et al., 2022). In many cases, financial compensation is not commensurate with the loss of access to long-term livelihoods, especially for farmers, fishers, and indigenous communities with social and cultural ties to the land. Therefore, the legal protection approach needs to be expanded to include appropriate relocation schemes, economic empowerment, and guarantees of social sustainability as an integral part of the land acquisition process.

Amidst increasingly massive industrialization, agrarian reform is also a crucial element in the construction of land law. Land redistribution, asset legalization, and the resolution of agrarian conflicts must run parallel to downstream policies to prevent the concentration of land ownership in large corporations. The state has a responsibility to ensure that industrialization does not create new inequalities in the land ownership structure. Thus, land law functions not only as a tool to facilitate investment but also as a corrective instrument against structural injustice.

Conclusion

The industrial downstreaming policy has had significant legal implications for the land acquisition system for public interest in Indonesia. The expansion of the definition of "public interest" through the amendment of Law Number 2 of 2012 to Law Number 11 of 2020, which was then reaffirmed in Law Number 6 of 2023 concerning Job Creation, has shifted the orientation of land acquisition from its original focus on basic public infrastructure to encompassing industrial estates, special economic zones, and strategic downstreaming projects. This change strengthens the state's role in facilitating land provision for industrialization projects, including through consignment mechanisms, simplified OSS-based licensing, and the establishment of a Land Bank. On the one hand, this policy provides certainty and acceleration for national industrial development; on the other hand, it has the potential to weaken the bargaining position of land rights holders, particularly when deliberations are not conducted in an equal and participatory manner. Furthermore, changes in land function and control resulting from downstreaming-based industrial development demonstrate the tension between the economic growth agenda and the principle of agrarian justice. The rise in agrarian conflicts, the potential marginalization of indigenous communities and vulnerable groups, and the risk of environmental damage emphasize that land law must function as an effective protection instrument, not simply a tool to legitimize accelerated investment. Therefore, downstream-based industrialization can only be considered equitable if implemented within a land law framework that guarantees legal certainty, respect for community rights, and a balance between development interests and socio-ecological sustainability.

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Author Contributions Statement

WIW designed the study, conducted the analysis, and prepared the manuscript. SI reviewed, supervised, and refined the manuscript. All authors approved the final version.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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