

## The Urgency of Progressive Law Reform on Virtual Land Ownership in The Metaverse World

### Urgensi Reformasi Hukum Progresif atas Kepemilikan Tanah Virtual di Dunia Metaverse

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**Abstract:** *The rapid development of the Metaverse has created new forms of property, one of which is virtual land ownership, raising questions about its recognition and protection in the Indonesian legal system. The central problem of this research is the absence of specific legal norms governing the ownership status, transfer, and protection of virtual land, which may lead to legal uncertainty and potential disputes. This study aims to analyze the legal position of virtual land ownership in Indonesia and to explore the urgency of formulating regulatory frameworks that ensure certainty and fairness for users. The research uses a normative juridical method with statutory and conceptual approaches, relying on secondary legal materials analyzed qualitatively. The findings show that while virtual land ownership in the Metaverse holds significant business potential, it currently lacks clear legal recognition within Indonesian property and contract law. As a result, users face weak protection of ownership rights and risks of exploitation in virtual transactions. The study concludes that progressive and adaptive legal norms are needed to address these gaps by formulating integrated regulations on virtual land, which would provide both legal certainty and protection for stakeholders while supporting innovation in Indonesia's digital economy.*

**Keywords:** *Virtual Land Ownership, Metaverse, Legal Certainty, Progressive Law, Indonesia*

**Abstrak:** Perkembangan pesat Metaverse telah menciptakan bentuk-bentuk kepemilikan baru, salah satunya adalah kepemilikan tanah virtual, yang menimbulkan pertanyaan tentang pengakuan dan perlindungannya dalam sistem hukum Indonesia. Permasalahan utama penelitian ini adalah belum adanya norma hukum khusus yang mengatur status kepemilikan, pengalihan, dan perlindungan tanah virtual, yang dapat menimbulkan ketidakpastian hukum dan potensi sengketa. Penelitian ini bertujuan untuk menganalisis kedudukan hukum kepemilikan tanah virtual di Indonesia dan mengeksplorasi urgensi perumusan kerangka regulasi yang menjamin kepastian dan keadilan bagi pengguna. Penelitian ini menggunakan metode yuridis normatif dengan pendekatan perundang-undangan dan konseptual, dengan mengandalkan bahan hukum sekunder yang dianalisis secara kualitatif. Temuan penelitian menunjukkan bahwa meskipun kepemilikan tanah virtual di Metaverse memiliki potensi bisnis yang signifikan, saat ini belum terdapat pengakuan hukum yang jelas dalam hukum properti dan hukum kontrak Indonesia. Akibatnya, pengguna menghadapi perlindungan hak kepemilikan yang lemah dan risiko eksploitasi dalam transaksi virtual. Penelitian ini menyimpulkan bahwa norma hukum yang progresif dan adaptif diperlukan untuk mengatasi kesenjangan ini dengan merumuskan regulasi terpadu tentang tanah virtual, yang akan memberikan kepastian hukum dan perlindungan bagi para pemangku kepentingan sekaligus mendukung inovasi dalam ekonomi digital Indonesia.

**Kata Kunci:** Kepemilikan Tanah Virtual, Metaverse, Kepastian Hukum, Hukum Progresif, Indonesia



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## Pendahuluan

The phenomenon of virtual land ownership in the Metaverse has evolved from a mere experimental concept into a tangible economic asset: plots of land on platforms such as Decentraland, The Sandbox, or Voxels can be valued, traded, rented, and monetized, creating their own markets with significant investment value (Siyae, 2021). Virtual land differs from ordinary digital content because it gives rise to ownership claims resembling real estate rights (ownership, exclusivity, and adjacent value), thus raising unique and risky legal issues if left unregulated (Ambarwati, 2022).

For this reason, this research focuses specifically on virtual land, rather than other aspects of the Metaverse, because: a). It closely resembles property/real estate rights; b). It has major economic implications for investors and digital MSMEs, and; c). It poses a high potential for disputes (ownership claims, transfers, expropriation by platforms, fraudulent transfers).

International studies show that the technical characteristics of DLT/NFTs and platform regulations (EULAs/TOS) make the legal status of virtual land ambiguous: is it a new *sui generis* property right, an intangible asset, or merely a revocable license granted by the operator? (Ball, 2024)

The main legal challenges arising from virtual land ownership include:

1. Legal classification: whether virtual land should be considered property, a crypto asset, or a license agreement—each carries different legal implications (choice of law, registration, third-party protection) (Radhakrishna, 2022).
2. Choice of law and jurisdiction: cross-border blockchain transactions weaken traditional connecting factors (*lex rei sitae*, domicile), complicating dispute resolution and enforcement (López Rodríguez, 2024).
3. Consumer and investor protection: risks of fraud, investment losses, and unbalanced EULAs that disadvantage users need to be addressed (Chance, 2022).
4. Interoperability and platform dependency: rights “recorded” on one platform may not be recognized on another; platform operators often retain technical control, enabling them to restrict or revoke users’ rights (Radhakrishna, 2022).
5. Taxation, AML, and financial classification: some virtual land transactions resemble investment products, requiring clarity in financial regulation (assets, 2022-2023).

The current regulations in Indonesia are inadequate. The Indonesian government has enacted several key laws for the digital economy and electronic transactions, such as UU Cipta Kerja (UU No.11/2020), UU Penetapan Perppu (UU No.6/2023), UU ITE (UU No.11/2008), PP Penyelenggaraan Sistem dan Transaksi Elektronik (PP No.71/2019), PermenKominfo tentang PSE (PermenKominfo No.5/2020), PP tentang Perizinan Berbasis Risiko (PP No.5/2021), and ketentuan Bappebti mengenai aset kripto (Peraturan Bappebti 2019). However, these frameworks are still unspecific regarding the legal nature of virtual land ownership—there is no registration system equivalent to a land registry, no provision recognizing NFTs/metadata as proof of ownership enforceable against third parties, and no clear rules on choice of law or

enforcement in metaversal disputes. As a result, virtual land transactions in Indonesia face legal loopholes that may harm the public and domestic investors (Radhakrishna, 2022).

The need for progressive law is imperative. To bridge these gaps, a progressive and adaptive legal approach is required, focusing on the objectives of legal certainty, consumer protection, and fostering innovation in the digital economy. Policy directions that could be considered include (López Rodríguez, 2024):

1. granting legal recognition to certain rights over virtual land (e.g., sui generis or hybrid license-title models) along with a registration mechanism;
2. establishing choice of law/dispute resolution rules that take decentralization into account (such as “Lex Metaversi” or specific arbitration/mediation clauses);
3. Strengthening consumer and investor protection through mandatory transparency in EULAs/TOS;
4. harmonizing financial regulation (AML/KYC, asset classification) and taxation;
5. creating technical standards for interoperability and ownership registries; and
6. promoting international cooperation to prevent enforcement barriers at national borders.

By placing virtual land as the central object of analysis, this study seeks to map normative gaps and propose specific progressive legal frameworks—not merely generalizations about the Metaverse—as a practical contribution for Indonesian policymakers. The analysis proceeds to outline normative options (legal recognition, registration mechanisms, dispute resolution models, and consumer protection frameworks) and provides integrated regulatory recommendations.

## **Metode Penelitian**

Legal research aims to obtain valid knowledge regarding binding norms by answering legal questions that arise from doubts and uncertainties, which serve as the foundation for the development of legal science (W, 2002). This study adopts a normative juridical research method, focusing on the study of legal norms, statutory rules, and legal principles in the Indonesian legal system.

The data used in this research relies entirely on secondary sources (library research), consisting of three categories. First, primary legal materials, namely statutory regulations relevant to virtual land ownership in the Metaverse, such as UU Cipta Kerja (UU No.11/2020), UU Penetapan Perppu (UU No.6/2023), UU ITE (UU No.11/2008), PP Penyelenggaraan Sistem dan Transaksi Elektronik (PP No.71/2019), PermenKominfo tentang PSE (PermenKominfo No.5/2020), PP tentang Perizinan Berbasis Risiko (PP No.5/2021), and ketentuan Bappebti mengenai aset kripto (Peraturan Bappebti 2019). Second, secondary legal materials, which include scientific works such as books, journals, and articles that discuss the metaverse, digital property, progressive law, and virtual transactions (Ambarwati, 2022). Third, tertiary legal materials, such as legal dictionaries and encyclopedias, which provide additional clarification of relevant legal concepts.

According to Muhaimin, normative juridical research examines law as norms, rules, principles, doctrines, and legal theories found in literature, with the aim of answering legal problems under study (Muhaimin, 2020).<sup>(3)</sup> In this research, the central problem is the unclear legal position of virtual land ownership in Indonesia and the urgency of progressive legal reform to address regulatory gaps.

The research stages were conducted through desk research, which included:

1. identifying relevant statutory regulations;
2. collecting and classifying secondary legal materials;
3. analyzing doctrines and legal theories related to virtual land ownership; and
4. synthesizing findings to formulate arguments and recommendations.

The analysis method used is qualitative normative analysis, which interprets legal materials systematically and relates statutory regulations to relevant legal theories and doctrines. This approach allows for a more profound understanding of the status of virtual land ownership and its implications in Indonesia. Ultimately, this research aims to provide constructive recommendations for policymakers in formulating progressive and adaptive legal norms to respond to Metaverse developments.

## **Hasil dan Pembahasan**

### **Definition of Metaverse**

The emergence of the Metaverse as a new digital ecosystem has been widely discussed as a response to the limitations of physical interaction during the Covid-19 pandemic, particularly in the economic and business sectors. In this virtual space, users can interact socially and economically in real time, creating opportunities beyond the restrictions of the physical world (Russel J., 2021). As Wood emphasizes, the Metaverse represents the next frontier for online engagement, expanding business concepts through technologies such as virtual reality, blockchain, and cryptocurrencies (Wood E., 2022).

Against this backdrop, the concept of virtual land ownership arises. In practice, virtual land is often traded and valued economically, similar to physical property, and in some cases even recognized as digital assets by regulatory authorities. However, the legal interpretation of whether virtual land can be equated with immovable property (*benda tetap*) under civil law remains problematic.

According to the Indonesian Civil Code (KUHPerdata), immovable property includes land and all objects permanently attached to it. Virtual land, by contrast, lacks physical form and geographical boundaries. Nonetheless, if interpreted through legal analogy (*argumentum per analogiam*), virtual land may be considered a form of intangible property (*benda tidak berwujud*) that carries economic value and exclusive rights of use, similar to intellectual property or digital assets. This position is reinforced by Bappebti regulations that categorize crypto-assets as tradable commodities, indicating regulatory openness to recognizing virtual assets.

Nevertheless, equating virtual land directly with immovable property is legally untenable, since civil law requires material substance and territorial attachment. Instead, it is more appropriate to classify virtual land as a *sui generis* legal object—a new category of digital property—requiring progressive legal interpretation and legislative adaptation. This approach aligns with Satjipto Rahardjo's view of progressive law, which emphasizes that law must adapt dynamically to societal and technological developments (Rahardjo S., 2009).

Thus, while the metaverse expands possibilities for ownership and commerce, the legal framework in Indonesia must clearly define the position of virtual land. Without proper regulation, uncertainty will persist regarding rights, transactions, and dispute resolution over virtual property.

### **How the Metaverse Works**

The Metaverse operates on the basis of Web 3.0. The way the metaverse works is basically similar to human behavior in the real world. However, users are required to log in to the virtual world with the help of supporting technologies, namely Augmented Reality (AR) and Virtual Reality (VR).

Augmented Reality (AR) is a technology that can combine 2D and 3D virtual objects with a real environment. Virtual objects are projected through computer media using a camera in real time; the impression obtained is as if the user can bring up a virtual object into the real environment.

Augmented reality, often abbreviated as AR, is different from virtual reality, which is often called VR. Virtual Reality (VR), or virtual reality, is a technology that can display a virtual environment to users so that users can feel the environment as if they are in the environment. The virtual environment is displayed through a computer that is visualized through virtual reality glasses (Thohari, Ronny, & Soffa, 2019).

Once a user logs into the Metaverse, the user can create a free avatar (virtual self-image) according to the user's wishes. After that, users can explore the world of Metaverse, socialize, watch music and dance entertainment, exercise, and get to know other users (Hou, 2022).

"Meta" means "beyond." This means that facing the future can be done by going beyond the current state or condition of life and even beyond the current sophistication of the internet.

For people who are interested in entering and utilizing the Metaverse, users can purchase Metaverse with crypto coins (cryptocurrency) such as Ethereum, Gala, Mana Decentraland, Enjin Coin, or Sandbox. When someone buys the Metaverse, the cryptocurrency market will experience a rise (Gupta, 2022).

### **Metaverse Investment Instruments**

One of the most commonly used investment instruments and transaction tools in the Metaverse is blockchain-based assets, particularly cryptocurrencies and non-fungible tokens

(NFTs). Cryptocurrencies function as utility tokens, while NFTs are unique tokens representing digital collectibles and virtual property (Ausop, 2018). Each metaverse platform applies its own crypto token, such as Axie Infinity (AXS), Sandbox (SAND), Decentraland (MANA), Floki Inu (FLOKI), and Highstreet (HIGH) (Ramadhan, 2022).

In Indonesia, the legal status of cryptocurrencies has been regulated since 2019. The Ministry of Trade, through the Badan Pengawas Perdagangan Berjangka Komoditi (Bappebti), recognizes cryptocurrencies as commodities that can be legally traded, but not as a means of payment. This position is stipulated in Peraturan Bappebti No. 5 Tahun 2019 tentang Ketentuan Teknis Penyelenggaraan Pasar Fisik Aset Kripto di Bursa Berjangka. In addition, Peraturan Bappebti No. 7 Tahun 2020 tentang Penetapan Daftar Aset Kripto yang Dapat Diperdagangkan di Pasar Fisik Aset Kripto ensures legal certainty for investors.

This legal stance creates a duality in recognition: cryptocurrencies are legal as tradable commodities but prohibited as currency substitutes, since under Law Undang-Undang No. 7 Tahun 2011 tentang Mata Uang, the only legal tender in Indonesia is the rupiah. NFTs, although not yet specifically regulated, may be analogized as digital assets with economic value and thus fall under the broad category of commodities or intellectual property depending on their function and use.

Therefore, while the Metaverse offers wide opportunities for investment through crypto and NFTs, their legal certainty in Indonesia is limited to trading within commodity markets under Bappebti supervision. To avoid disputes, progressive legal frameworks are needed to address ownership, taxation, and consumer protection in relation to virtual assets.

### **The Metaverse Land**

Users can invest in the Metaverse through platform-specific tokens such as Axie Infinity, Decentraland, and Sandbox, which are accessible through international exchanges like Binance or local platforms such as Tokocrypto (Ramadhan, 2022). In addition, users may also invest in Metaverse Exchange Traded Funds (ETFs), which provide exposure to companies developing or entering the Metaverse ecosystem.

Among the various forms of investment, virtual real estate has become particularly attractive. Unlike the real world, where land is a tangible, immovable object, virtual land is a digitally scarce asset represented by a non-fungible token (NFT). NFTs function as unique digital certificates that record ownership and authenticity of assets on the blockchain (Wood E., 2022). In practical terms, an NFT attached to a parcel of virtual land acts as a digital deed of ownership, transferable via blockchain transactions.

However, the legal recognition of NFTs in Indonesia is still uncertain. While Bappebti has regulated cryptocurrencies as commodities tradable on futures exchanges (Peraturan Bappebti No. 5 Tahun 2019; Peraturan Bappebti No. 7 Tahun 2020), there is no specific regulation regarding NFTs as proof of ownership. Under the Indonesian Civil Code (KUHPerdata), immovable objects (*benda tetap*) such as land are subject to national land law and require state recognition through official deeds (*akta otentik*) issued by authorized

officials. Virtual land, being intangible, cannot be categorized as immovable property; rather, it may be analogized as an intangible movable asset or a commodity with economic value.

This phenomenon raises important questions in case of ownership disputes. For example, if two parties claim the same parcel of virtual land through different NFT transactions, which legal framework governs the resolution? At present, disputes may be addressed contractually through terms of service for Metaverse platforms or through civil litigation in Indonesian courts if losses occur. However, without specific regulation, enforcement remains problematic, as blockchain transactions are decentralized and often cross-border in nature.

To provide legal certainty, progressive legal reform is needed. NFTs representing virtual land should be explicitly classified under Indonesian law—either as commodities under Bappebti supervision or as digital assets requiring special regulation. Moreover, mechanisms for dispute resolution must be clarified, whether through arbitration, consumer protection agencies, or specialized courts for digital transactions. Without such regulation, investors face significant risks, and the protective function of law cannot be fully realized.

This legal gap creates uncertainty in case of ownership disputes. For example, if two parties claim the same parcel of virtual land through different NFT transactions, which legal framework governs the resolution? Currently, Metaverse platforms' terms of service can address disputes contractually, and if losses occur, Indonesian courts can handle civil litigation. Nevertheless, without specific regulation, enforcement remains problematic, as blockchain transactions are decentralized and often cross-border.

Other jurisdictions have begun to explore recognition of NFTs:

- a. United States: NFTs are generally categorized as digital assets. Courts treat disputes over NFTs under principles of contract law, intellectual property, and consumer protection. For example, in *Friel v. Dapper Labs, Inc.* (2023), NFTs linked to basketball highlights were treated as investment contracts subject to securities regulation under the Howey Test. This trend shows the U.S. leans toward functional analysis—if NFTs act like securities, they fall under securities law.
- b. European Union: The EU does not yet have a unified NFT regime, but under the Markets in Crypto-Assets Regulation (MiCA) 2023, NFTs may fall outside standard crypto-asset rules unless they are fractionalized or mass-issued, in which case they may be regulated like financial instruments. Some EU member states (e.g., France) classify NFTs as digital assets with property value, allowing them to be taxed and inherited.

These comparative examples demonstrate that NFTs may serve as recognized legal objects in other jurisdictions, either as securities, commodities, or intellectual property. For Indonesia, this opens two regulatory pathways:

- a. Commodity Approach – NFTs could be placed under Bappebti's jurisdiction, similar to cryptocurrencies.

- b. Intellectual Property/Digital Asset Approach – NFTs could be regulated as digital assets with property rights, including recognition in inheritance and contract law.

To provide legal certainty in Indonesia, progressive reform should explicitly regulate NFTs representing virtual land. Key issues include classification, dispute resolution mechanisms (arbitration, consumer tribunals, or specialized digital courts), and integration with existing property and contract law. Without this, the promise of virtual land ownership remains legally fragile, despite its economic potential.

### **The Urgency of Law Reform in the Metaverse Era from a Progressive Law Perspective**

The meaning of legal reform is not merely changing, growing, correcting, reviewing, replacing, or removing the provisions of legal rules and principles in the applicable laws and regulations in a legal system. Legal reform must be understood as the spirit underlying the law to create a better, fairer, more useful legal system and provide legal certainty (Prasetyo, 2017).

Humans, as social beings (*zoon politicon*), must carry out their rights and obligations alongside other individuals in everyday life. The government aims to regulate and protect the rights and obligations of all citizens through laws and regulations. Based on the Indonesian constitution, which states that 'The State of Indonesia is a state of law,' as explained in Article 1 paragraph (3) of the 1945 Constitution of the Republic of Indonesia (UUD 1945), a legal system is needed to create a harmonious and orderly society.

However, the rapid development of human civilization often lags behind the law. In practice, efforts to apply the law in Indonesia often face challenges from the development of society itself, and it is a challenge for the government to make the law an instrument of legal protection against social changes that occur. In this context, law acts as a tool of social engineering as developed by Roscoe Pound in the United States (Fuadi, 2013). Pound's thinking emphasizes the "reality of law," i.e., the desires of the public, so that law is not only considered a text in books. Recent scholarship reinforces this notion, emphasizing the need for adaptive legal systems to govern rapidly evolving digital markets and blockchain-based assets (Yin, 2022).

If elaborated further, in the Indonesian context, there is the legal theory of development of Prof. Dr. Mochtar Kusumaatmadja, S.H., LL.M., which is influenced by the way of thinking of Harold D. Laswell and Myres S. McDougal (policy approach) as well as the legal theory of Roscoe Pound (with the exception of his mechanical concept). Laswell and Myres S. McDougal (policy approach) and Roscoe Pound's legal theory (with the exception of the mechanical concept) (Sidharta, 2006).

Mochtar Kusumaatmadja transformed the notion of law from a mere tool to a crucial instrument in constructing a society that the community longed for and required. Thus, the value of formality and the existence of law is not only considered the result of efforts of interests or power but also comes from the community itself. Essentially, the law exists within society to ensure certainty, benefit, and justice.



Although Indonesia adheres to the positivist paradigm, ideally the purpose of law (benefit, justice, and certainty) should be reflected in the regulations that govern people's lives. Law is understood as a state product in the form of legislation (Raharjo, 2009). Several assumptions underlie legal progressivism, including: (1) law exists for humans rather than for its own sake; (2) law is always in a state of 'law in the making' and is never final; and (3) law embodies human morals, not technology devoid of conscience (Nawawi, 1984).

Therefore, for Satjipto Rahardjo, law is not a final scheme but continues to move and change following the dynamics of human life. Law must continue to be studied and explored through a progressive approach to reach the truth in an effort to achieve justice (Rahardjo S., 2010).

Likewise, the rapid flow of human development tends to favor digitalization. The metaverse world opens up opportunities for human activities in the real world to shift to the virtual or digital world. Human habits in every aspect of life, previously carried out face-to-face, such as transactions in traditional markets, are now shifting to digital activities, which are considered to provide high economic benefits. Recent studies emphasize that the emergence of NFTs and virtual land ownership raises unresolved legal questions, especially about the recognition of digital property rights and dispute resolution (Kołacz, 2021; Zhao, 2022).

Gradually, the Metaverse will become increasingly popular for people to socialize, invest, and carry out economic activities with the advantage of low costs while reducing the risk of spreading the virus in the pandemic era. However, progressive regulatory formulations or legal updates are needed to provide legal certainty, protection, and the application of the law for people engaging in economic activities in the Metaverse world. Therefore, no matter how technology transforms society, the law remains present and continues to play its role in safeguarding society.

Progressive legal reform is needed, especially for the people in Indonesia, to address the various potential opportunities for crime that arise in the Metaverse world. Shapiro explains that legal reform occurs when a person or group of people criticize certain aspects of the legal system and propose improvements, both appropriate and incompatible with what modern observers consider reform (Shapiro, 2019).

The question is, what kind of legal reform can fulfill the needs of today's society? The answer is progressive law. It is important to understand that the law is an institution that aims to lead humans to a just, prosperous, and happy life.' This perspective views law as a tool to actualize human interests, specifically the attainment of a just, prosperous, and happy life (Kusuma, 2009).

Therefore, progressive legal reform is needed to protect the society that is increasingly active in the digital world. This reform must formulate the goals and ideals of law in the field of the metaverse into policy recommendations and regulations that are not only legally positivistic but also form responsive legal norms and influence people's behavior.

The necessary legal progressiveness must not only address norms related to new legal objects encountered by society, but it must also reflect the values and principles that will shape the legal norms being developed. Progressive legal theory views law not as the ultimate goal of humans, but rather as a tool to achieve that goal. Law must serve humans, not the other way around.

## **Kesimpulan**

The study finds that the legal status of virtual land in the Metaverse remains uncertain in Indonesia. Although non-fungible tokens (NFTs) function as a digital deed of ownership, they cannot yet be equated with authentic ownership certificates under Indonesian land law. Consequently, NFTs are better understood as digital assets representing contractual rights rather than legal proof of property ownership recognized by positive law.

Second, the current regulatory framework in Indonesia reveals significant weaknesses. There are no explicit provisions in national legislation that govern the validity of NFTs as ownership deeds, nor is there a clear mechanism for resolving disputes related to virtual land. Existing regulations on electronic transactions and intellectual property provide partial guidance but fail to address the legal vacuum adequately surrounding digital property rights in the Metaverse.

Third, this condition highlights why progressive law is relevant. Progressive legal thought emphasizes that law should not be rigid or merely technical but must evolve in line with societal needs and technological development. Applying progressive law means the Indonesian government must actively formulate adaptive and comprehensive regulations on digital assets and virtual land. Such regulation should ensure legal certainty, protect ownership rights, and provide accessible dispute resolution mechanisms for users engaging in metaverse transactions.

Thus, while the Metaverse presents vast economic opportunities, its sustainability in Indonesia depends on the immediate establishment of a progressive regulatory framework that guarantees justice, certainty, and benefit for the community in navigating virtual transactions.

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