

A review of the reliability of land bank institution in Indonesia for effective land management of public interest

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ABSTRACT

It is not easy to get a decent housing for low-income people (LIP) in the cities of Indonesia due to the limitation of land available for development in the urban areas allows the speculators to retain the benefits of land in an unregulated commodity business. This study aims to examine and analyze the establishment of land bank for ensuring the implementation of more prosperous, fair sharing and sustainable land management. The observational method of reviewing the land use issues, land bank models and legal basis was performed to understand the eligibility of land bank in management of land use to serve public interest of infrastructure construction and development of affordable housing for LIP in urban areas. The establishment of land bank institution in Indonesia is considered important to accommodate the need of lands in urban areas for a wide array of purposes. The analysis of landless housing prices in the Jabodetabek region for the development of five-story residential building can save more than 50% of income toward the necessity of affordable housing for LIP. The finding of this study may provide a contribution to get better understanding on the decision making process of sustainable land management at all levels of government in Indonesia particularly by the provincial government of Special Capital Territory of Jakarta.

1. Introduction

Indonesia is the country with the largest population of Muslims in the world and hosts approximately 13% of the world's Muslims (Hefner, 2016). Muslims believe that God forms man from the dust of ground, then returns to the land, and then resurrects again from the land, as mentioned in Surah 20 Verse 55 of the Holy Quran. The constitutional power of government over the territory of Indonesia stated in Article 33 paragraph 3 of the 1945 Constitution of the Republic of Indonesia that the land shall be controlled by the state and shall be made use for the prosperity of all people due to the status of land is the property of God based on the interpretation of "land tenure" mentioned more than 20 times in the Holy Quran as the primary sources of Islamic law. Although the country maintains absolute power over the land, the country grants fiefs to landholders who served as citizens paying the land tax and cultivating the agricultural lands (Khan, 2001). Statutory way of the

land tenure arrangements in Indonesia is traditionally controlled by the state and indigenous communities to guarantee a sustainable management of the natural resources. However, conflict over land or other natural resources has increased as a consequence of the contradiction between these traditional arrangements and the control of lands by the private companies allowed by the government mainly during the New Order (1967–1998) and part of the reformation era (2005–2014), especially in the rural and remote areas, to favor the corporate concessions (Riggs et al., 2016). The 1945 Constitution mandates the Republic of Indonesia to administer the land and human settlement. A change in the relationship of humankind to land is one of the most important influences on the development of land administration systems to organize all the regions of Indonesia while a relationship has always been dynamic (Axinn and Ghimire, 2011).

The fourth paragraph of the Preamble of the 1945 Constitution states that the formation of government of the Republic of Indonesia shall

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protect all people of Indonesia and their entire native land in order to improve public welfare and to advance an intellectual life of people. Two of four goals of establishing the Republic of Indonesia emphasize the role of country to protect the nation and homeland for the prosperity of people. The fifth principle of Pancasila as the foundational philosophical theory of Indonesia states the social justice for all people, whereas the government has a state-administered mandate to organize any lands for the prosperity of society. The government of Indonesia faces great difficulties in getting access to provide the lands for the massive infrastructures development in all regions with the authority to tax and to finance it (Nasution, 2016). For instance, the government of Special Capital Territory (DKI) Jakarta still have to overcome many obstacles for building affordable housing for the residents of Jakarta city in order to provide a better service to meet the principles of Pancasila due to the practice of corruption has been around for five decades in the delivery of infrastructure services (Widoyoko, 2007). Given the price of undeveloped lands in some prime locations of the Jakarta city has become more expensive than second-hand apartments to incriminate the low-income people (LIP) to buy one unit of house. Vertical housing development has been made for some regions of Jakarta based on the distribution pattern of lands and apartment prices to meet growing demand to supply housing stock at affordable prices for LIP. However, the LIP in Jakarta city must pay the price of land according to a proportional comparison value of the property rights to flat component (Kendall and Tulip, 2018). The fact that it is an irony in administering of land in Indonesia due to the authority of government can be negotiated by the private sectors. The risk of failure in dealing with renegotiation and rental agreement to release the lands from the private landowners can be reduced by improving the responsibility of landowners arranged in a formal contract to protect the right of tenants for LIP (Akram et al., 2019). A decision of the landlords to sell their lands to meet the acquisition of lands for public purposes can be affected by the compensation rules (Ghatak and Mookherjee, 2014). Land readjustment as an expropriation method of the land transition from private to public ownership has been proposed to respond the need of school lands free of charge in Turkey (Uzun and Celik Simsek, 2018).

Increasing the area of land and natural resources to have been under the control of the private sectors has fundamental implications in providing the affordable price of house for LIP in the big cities (Fulazzaky and Gany, 2009; Hazell and Wood, 2008) and in ensuring the provision of agricultural lands for the rural poor (Barbier and Hochard, 2016; Fulazzaky, 2017). It is inseparable from the implementation of the weak government practices in administering the lands in all regions of Indonesia. The cases of land dispute in the court even to Supreme Court have been reported approximately 50% of all cases addressing the Supreme Court to have been drained energy of the nation due to they create an economic disparity and jealousy (Ilorah, 2009; Yu and Wang, 2017). The cases of Potanigrah, Meruya, Kedoya, Tanjung Priok, Outer Batang and others with a total civil court verdict of 7861 decisions in the last 10 years have been seen as controversial in administering the lands of certain areas in Indonesia (Power, 2018). On the economic growth pathway, the concern of real estate business to abandoned lands is the main reason for the shrinking lands and the real estate development on an abandoned land leads to an increase in the land price (Li and Li, 2017). A real estate company that having the extensive lands managed by a number of people constituted power can control many pieces of lands promoted the formation of latifundia (Paulino, 2014). Consequently, it has been violated Article 17 of the Basic Agrarian Law No. 5/1960 (UUPA No. 5/1960) on latifundia to violating the latifundia ban by practicing over land control of controlling the lands outside the territory of domicile. For a long-term solution, a viable incentive of LIP tax credit offered by the government to private sector to encouragingly invest in the provision of affordable housing must extend beyond regulatory compliance, while the incremental costs of providing the social and public facilities might be partly met from public funds in the form of service payments for allowance of various benefits received from the

social and public facilities to residents of the residential complex. A land bank institution is the public authority created by the regencial/municipal, provincial or central government to effectively manage and repurpose an inventory of underused, abandoned or foreclosed property in accordance with the responsibility of each government level in Indonesia as regulated by the law. The establishment of land bank institution may take a specific role to guarantee the availability of scarce resources of land caused by an increased mobility of land use for the development of public facilities and affordable housing for LIP in urban areas and to facilitate the mediation of local tenant farmers with absentee landowners. In spite of the different land management models with various types of land use have been existed in Indonesia (Bedner and Arizona, 2019; Ifrani et al., 2019; Toumbourou and Dressler, 2021), the impact of land tenure by the local customary communities and private companies faced with the land acquisition problems of developing affordable housing for LIP and different infrastructures of public interest needs to be resolved in the near future. Created an appropriate institution of the land bank demanded flexibility and adaptation to the traditional customary laws and indigenous people of different regions with respecting the rights and rules of landowners may help to provide a solution for future land management options that encourage the most sustainable land management. Reviewing the existing conditions of land use issues, land supply models and status of land tenure can provide a formalized knowledge base for solving the land use problems to having a sense of urgency and conceptual model of creating the land bank authority. The objectives of this paper are: (1) to review the existing evidence-based practices of the legal basis, land use issues, land tenure arrangement models, and land supply models to get better understanding on the proposition of establishing the land bank institution in Indonesia and (2) to offer a new conceptual model of the land bank institution to ensure enough lands for the purposes of development of affordable housing for LIP and the construction of public infrastructures.

2. Observational methods

The observational method of reviewing the land use issues, land supply models, and land tenure arrangement models adopted in various regions of Indonesia may provide a framework for understanding the eligibility of land bank established to promote sustainable land management. The target subjects of reviewing the issues of land use, land supply, and land tenure were observed from accumulating the evidence of various land management practices to have existed in Indonesia.

2.1. A review of the land use issues

The government has the rights to regulate the allotment, use, provision, and maintenance of the lands (Trembecka and Kwartnik-Pruc, 2018) and also has the rights to regulate the legal relation between legal subject and land (Cotterrell, 2000). The authority of granting the land rights in Indonesia is fully controlled by the government where the National Land Agency is the leading sector of land administration (Akinola, 2018). The involvement of other government agencies to integrate the management of land includes the Local Government, Ministry of Environment and Forestry, Ministry of Agriculture, and Ministry of Maritime Affairs and Fisheries. The idea of the Indonesian Law to involve many government agencies in the management of land could be due to the land as a gift from God should be easily used as much as possible to the welfare of people (Pillay, 2017). The land tenure of people has been regulated by the government based on the rights of the state to administer the land as mentioned in Article 2 paragraphs 1 and 2 of the UUPA No. 5/1960. The municipal and regencial governments attempt to deal respectively with the legal regulations related to the provision of lands in urban and rural areas for the purposes of affordable housing development for LIP and public infrastructure delivery and construction. The importance of regulatory enforcement is dependent on the analysis of the land use regulations to respond to social issues facing

the city for the development of affordable housing for LIP.

Contrary to the Law No. 1/2011 on Housing and Resettlement Area that regulates the decent housing prices, the price of lands becomes increasingly unreachable by the people (Elmanisa et al., 2017). For instance, the determination of house prices in Jakarta Metropolitan Region could be dependent on the design, facilities, reputation, reinvestment value, pricing policy, brand and speculative behavior (Rahadi et al., 2013). The land-related issues of land valued as business commodity, land ownership violations by the practices of latifundia and absentee, land use deviation from spatial planning and local governance arrangement, and ambiguous rights of managing the lands have triggered less access to the availability of lands for public purposes. Many government officials face difficulties to get an available land for development of public infrastructure, including the provision of land for construction of affordable housing to LIP in the urban areas. A flexible enforcement of the regulations and a widespread and dynamic informal housing-production system do not affect the housing markets in several cities of Indonesia. The impact of the strict land-use regulations is considered as an investment in the physical infrastructure related to housing and causes a substantial detriment to an urban development and economic growth (Monkkonen, 2013). Fig. 1 shows the paradigm shifts in the land tenure for the most public lands in Indonesia to deal with an effective performance appraisal process regarding the reasons of increasing the price of lands becoming away from reachability of the people.

The complexities of valuing the lands are related to the absence of an appropriate and strategic land management policy framework (Chirisa et al., 2014) due to the rights of state as delegated by the UUPA No. 5/1960 to the government are not functioning properly. An increase in the price of residential lands could be due to the effect of land management practices on the fluctuation of land appraising shown in Fig. 1 is related to: (1) the paradigm views the land, especially for the rural area, as something sacral, religious, magic, dignity and honor since the land owned by clan elite although the land ownership of urban area may gain the social status of successfulness, wealth and prosperity, remarked by the basic price of 100%, (2) the land tenure is a really important part of the invest in commodity-related businesses leading to increase the price of land by 100% from 100% to 200%, (3) the excessive tenure practices can violate the prohibition of latifundia, leading to the control of land is dominated by the handful of people or large corporations, causing the price of land increased by 200% from 200% to 400%, (4) the practice of absentee landowners results in increasing the amount of abandoned land, especially for the areas surrounding a big city, estimated to cause an increased price of land by 200% from 400% to 600%,

(5) the deviation of land use planning, especially for agricultural land, can ignore the principle of land reform due to a weakness of local land tenure management system, conflict of interest and complex issues of the land tenure affecting the price of land increased by 200% from 600% to 800%, and (6) the ambiguous authority between local and central government can limit an engagement of the government officials with professional practices, missing the goal of government intervention led to an increase in the price of land by 200% from 800% to 1000%. For example, the average selling price of residential land at Taman Rasuna Apartment complex of South Jakarta purchased in 1997 was stable at USD 35.7 per m² compared to USD 357.5 per m² in 2021 and this is often thought of as having been caused by a mismanagement practice of the land.

The oligopoly in real estate development of the land ownership (Coiacetto, 2009) that controls the lands for plantation, farm, timerland and large real estate consisting 25 groups of the private companies with a majority-owned venture by the tycoons has been given enough authorities by the local and central governments to deal with the management of approximately 5.1 million hectares (MHa), whereas Indonesia covers around 10 MHa of the total industrial oil plantations (Gaveau et al., 2016). Noted that tycoons are the persons of ethnic chinese in Indonesia who are successful in the property business and have become very rich and powerful through their ownership of the lands. A land area of 128.297 km² is estimated to be nearly half of the Java island land area, where approximately 2 MHa of that land has not been planted and unfortunately part of it is becoming a neglected land. Fig. 2 shows part of the private palm oil plantations controlled by the small group of large plantation owners that control the production and market for palm oil to be represented by no more than 3% of whole Indonesian population. The oil palm plantations in Indonesia stretched across the lands of 12 MHa produced over 34.6 billion tons and exported nearly 73% of palm oil in 2016 has been projected to reach around 13 MHa in 2020, resulting in the complex environmental problems of this country considered necessary to protect the local ecosystems and society for the justice equality and sustainable prosperity of all people (Roestamy and Fulazzaky, 2021; Shigetomi et al., 2020).

The top 10 landlord real estates in Indonesia include: PT Agung Podomoro Land Tbk, PT Agung Sedayu Group, PT Alam Sutera Realty Tbk, Ciputra Group, PT Intiland Development Tbk, PT Lippo Karawaci Tbk, PT Pakuwon Jati Tbk, PT Paramount Serpong, PT Summarecon Agung Tbk and Sinarmas Land Group. The involvement of these 10 real estate companies to boost housing development has completed hundreds of the large-scale residential projects in almost all major cities of Indonesia (Rakodi and Firman, 2009). In recent case of the Jakarta bay

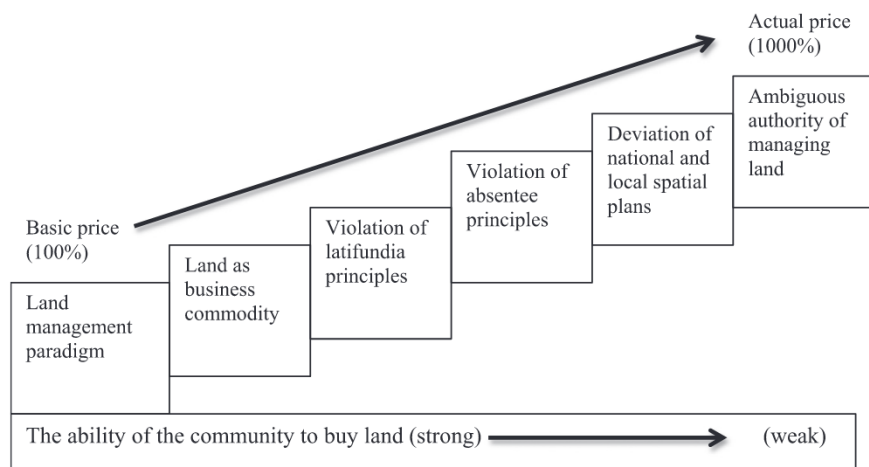


Fig. 1. Increasing of the land price by many different things*

*Source: The community paradigm development model of house ownership separated from the land to accelerate the provision of affordable housing for LIP. Final Report, University of Djuanda, 2016.



Fig. 2. Part of the palm oil plantations in Indonesia*

*Source: The community paradigm development model of house ownership separated from the land to accelerate the provision of affordable housing for LIP. Final Report, University of Djuanda, 2016.

reclamation projects, the real estate construction and development projects require the expertise of managers who have experienced with many large-scale property projects. Therefore, all these landlord real estates have been qualified to be worthy of doing together the projects of reclaiming 17 artificial islands in the western outskirts as a new district of the Jakarta city (see Fig. 3). A preliminary analysis of the project indicates the needs to construct a new airport and to expand the Jakarta Port of Tanjung Priok (Jayanthi and Damayanti, 2015). It seems that the reliable program of providing affordable and livable housing for all levels of society including LIP is still not considered better approach than spending a building out a more complete for the rich people. Role of the DKI Jakarta government in the provision of affordable housing to LIP is very important in the decision-making of developing the new resettlement areas with a concept of residential balance in accordance with the Decree of Minister of Housing Affairs No. 7/2013 due to the urban poor provides a cheap labor and may handle the typical works that are not usual to the rich. It is suggested that an alignment among the various political stakeholders has to do with adjusting the project approach and schedule. Although it has been claimed that one of the Jakarta bay reclamation purposes can solve the problem of water quality (Fulazzaky, 2009, 2010; Kooy and Walter, 2019), the direct effects of border wall

construction and maintenance will be destroying not only corals but also entire way of habitat life in area of the Jakarta bay reclamation projects. This may force the local fishermen and fish markets in the project-affected communities out of their businesses. Successful project delivery requires the implementation of correct decision making systems (Jawad et al., 2018) that may control the quality and potential of the land space development in the provision of affordable housing for all levels of society, including for LIP. Indonesia faces challenges with the land tenure issues in providing the affordable housing for LIP in the big cities and the opportunities to access and utilize the agricultural lands for the rural poor due to the increasing of land price is far from a reachability of the people. Role of the state in controlling the price of lands can optimize by establishing the land bank institutions at all levels of government to prevent the practice of violating the principles of latifundia and absentee landowners associated with the legal land use management. A review of the land supply models and land tenure under freehold and leasehold tenure associated with the land use issues is required to provide an insight into the reasons why the establishment of land bank institution is urgent for developing the patterns of land use and spatial planning framework of Indonesia in the future.



Fig. 3. Plan of the Jakarta bay reclamation and development*

*Source: The community paradigm development model of house ownership separated from the land to accelerate the provision of affordable housing for LIP. Final Report, University of Djuanda, 2016.

2.2. A review of the land supply models and land tenure

The goal of this section is to review the various existing models of land supply and the land tenure to support the land bank management framework of providing enough lands for public interest. A demonstrative evidence of the land supply models does exist in Indonesia even a part of these models has been regulated in the law. The management of land transaction involved in the land bank system can help maintain the suitability of different land supply models and undertakes a just distribution of the land for development of affordable housing for LIP in urban area or construction of infrastructure served to public interest.

2.2.1. Utilization of abandoned land

The problem of latifundia violated the UUPA No. 5/1960 and the Regulation of Minister of Agrarian and Spatial Planning/Head of the National Land Agency (Permen ATR/BPN) No. 18/2016 concerning the transfer service of certain right-to-build titles in certain areas has widespread consequences to have been the basis of extreme inequities in the wealth and biodiversity loss in Indonesia (Chaves, 2013). The Government Regulation in Lieu of Law (PERPU) No. 56/1960 concerning the stipulation of agriculture land area regulates the limitation of private land ownership based on the population density: 20 ha of not as densely populated area, 12 ha of least densely populated area, 9 ha of densely populated area and 6 ha of most densely populated area. Land tenure by the small group of tycoons in the practices of latifundia and absentee landowners have been violating the principles of land ownership regulated by the PERPU No. 56/1960 and are the origin of uncontrollable land prices. According to the Government Regulation of the Republic of Indonesia (PP) No. 36/1998 on the control and utilization of abandoned land, the criteria of neglected land are the lands to have not been utilized and/or maintained properly and the lands to have not been used in accordance with the circumstance, nature or purpose of granting the rights.

The cause of abandoned lands particularly in the rural and remote areas across the country including the areas of concessions granted by the government during the New Order and reformation era is due to the purposes of integrated multiple land use have been long neglected by the concession holders and have historically accounted for a considerable portion of the large-loss fires report (Page and Hooijer, 2016; Vetrina and Cochrane, 2020). The reason of abandoned lands in the urban areas is linked to urban expansion, depopulation and speculation leading to a failure of the landowners in determining the assignment of lands concerned with the economic nature of activities, which may create a negative impact of horizontal conflicts (Surya et al., 2020). The tendency of abandonment to exceed the rate of land use is the land abandoned to not only the plantation areas (Jaquet et al., 2019) but also the areas of land around the cities, such as the areas of land around the region of Jakarta, Bogor, Depok, Tangerang and Bekasi, known locally as the Jabodetabek, the region of Gresik, Bangkalan, Mojokerto, Surabaya, Sidoarjo and Lamongan, known as the Gerbang Kertosusilo, and the region of Medan, Tanjung Morawa, Binjai and Deli Serdang, known as the Mabide.

Agricultural land tenure by the private companies can affect the urbanization of people from the rural areas to big cities due to many people had been losing their lands as the most important natural resources for livelihood to sustain the basic needs in rural areas and in small towns (Satterthwaite et al., 2010). More than half of the population lives in the urban areas, which grows at the rate of 4.1% per year, is predicted to reach 68% of the Indonesian population in the cities by 2025 (Wajdi et al., 2017). The problem of land speculation can lead to an incidence of rising land prices (Wissink et al., 2017) and may result in scarcity of land procurement for the development of infrastructures to public interest and for the provision of affordable housing for LIP in the urban areas. The management of soil functions using a public service agency model of land bank can help transfer the abandoned lands to a voluntary land-granting model by the tycoons of land rulers as act of

honor according to the fifth principle of Pancasila. The government has been urged to issue a decree on the suspension of exercising any control over the access of speculators to the land rights for the interest of people pursuant to the applicable provisions according to the principle of ready to share land with the people.

2.2.2. Corporate social responsibility

Many large corporations in Indonesia have a corporate social responsibility (CSR) to provide enough dormitories for their workers. A worker will be asked to leave his dormitory by the following cases: when a worker retires or when a worker quits working for the company. In certain cases, a worker who has retired from a company was forcibly removed from his dormitory (Lee and Smith, 2009; Maestas, 2010) due to serious concern of possible risk to the provision of dormitory for a new worker if a worker who has retired still staying at his dormitory to possibly face with a bailiff. A large corporation has a duty to own the land at a convenient location close to activities to allow a construction of the dormitories or affordable housing for their workers.

According to the Indonesian Law No. 40/2007 on limited liability companies, the establishment of land bank institution is required for every plantation land of larger than 500 ha, every residential estate of larger than 150 ha and every industrial estate of larger than 100 ha with an obligation to set aside at least 5% of their land for the benefit of their workers. The largest private and public companies that operate on the small plots of land at different locations may contribute an obligation by setting aside 5% of their annual company's profits to provide enough lands for the development of affordable housing for their workers by involving the role of land bank institution.

Land tenure by the state-owned companies, national or multinational corporations around the factories and plantations can be setting aside a part of their lands to land bank management program for development of affordable housing for the workers through a profit sharing scheme mechanism to have the CSR system. The obligation of land ownership to provide a part of his land for his workers must be regulated by the government by converting it to the CSR costs or to include a tax-deductible expense (Howard-Hassmann, 2013).

2.2.3. Regional assets

The regional assets consisting of the moving assets such as animals, furniture, vehicles and non-moving (fixed) assets such as lands, buildings and other pre-existing facilities are owned either by city, regency or province. The purpose of utilizing the regional assets, which are managed by the Regional Asset Management Board, is to make a benefit for the regional incomes. Many land assets in Indonesia are neglected due to the leadership of local authorities does not to seriously take care of land for the purpose of infrastructure development for public interest and affordable housing for LIP. Because the legal recognition of collective land ownership is still not getting much attention, the regional economic growth and development cannot yet match the expectancy of people in the last decades due to many collective lands cannot be used by the third parties to increase economic growth of the region (Barca et al., 2012).

The village cash lands of crooked land, kitsitir and gogolan in the Java island that have been applied to change the status of a village into a town must be submitted all these lands to the regional assets. The densely populated provinces of Banten, West Java, Central Java and East Java can utilize the village cash lands to ensure an effective social investment of the lands managed by their land banks. Certain regions of regency, municipality or province like Cirebon, Yogyakarta Special Region, Medan, Surakarta and other regions that have an ex-kingdom land can utilize their untapped lands to be handed over to a land bank institution for the development of affordable housing for LIP.

Legal status of collective land must be regulated by the Local Government Act to allow the people having to work more closely together and to develop effective land uses to increase the regional income. Fair market value of donated benefit from collective land tenure must be

determined on the basis of local earned income tax by the local government for each year. The management of collective lands by the local government can be designed as an initial capital investment of establishing the land bank institution (Busroh and Santiago, 2017). The role of land bank institution can be directed by the local government to supply enough land for the construction of affordable housing to LIP and public infrastructures.

2.2.4. National and regional funds

One of the ways applied to encourage every local government to purchase the lands is channeled a special allocation fund by central government to the regencial/municipal and provincial governments (Gray and Barford, 2018). For example, the federal government of the United States allocates the state budgets to the land bank institutions of being submitted by each state for every year, while the state-controlled lands are mostly used for the construction of affordable housing for people (Wallis, 2000). The Housing Development Board in Singapore is entrusted to handle the tasks of providing affordable housing for the people (Beng-Huat, 1996). Each local government in Indonesia is at the forefront of national movement to encourage the lands purchasing to support the development of infrastructure for public interest and affordable housing for LIP. The formulation of land related policies requires a clear understanding of the regional and national frameworks and is in an urgent need of the sufficient lands by setting aside 5% of the local budgets to the acquisition of targeted lands by the local government for the development of affordable housing for LIP and infrastructure for public interest, while the central government may consider to fund the construction of infrastructures and public facilities. The land bank role of each region is designed to have an authority to manage around 5% of the local budget for purchasing the lands to supply enough land for the development of affordable housing to LIP and public infrastructures in the whole of his territory.

2.2.5. Land enclave

By definition an enclave of the territory or part of the territory is entirely surrounded by the territory of other state (Jones, 2009). Some of the enclaved states include Lesotho, Vatican City and San Marino due to Lesotho is surrounded by South Africa while Vatican City and San Marino are surrounded by Italy (van Schendel, 2002). Similar to an enclave definition of the state territory can be used to describe an enclave of the agricultural land to support the land supply models. A land enclave of the cultivation rights (HGU) of the lands for the PT Perkebunan Nusantara (PTPN) at certain locations in Indonesia has a large piece of the agricultural land surrounded by many small pieces of lands owned by many people. The oil palm plantations around the cities of Deli Serdang, Serdang Bedagai, Simalungun and Medan of the North Sumatra Province are surrounded by many villages that have many houses, buildings, agricultural lands and other land service facilities owned by different land tenures.

Many tea plantations managed by the PTPN 8 in the Jabodetabek region have a large enough piece of the enclaved lands as the sources of lands for shared equity homeownership program of the land bank. The only way powerful enough to stop the tenure of agricultural lands by the PTPN 8 is the enactment of the Local Government Act on land use and land tenure system. The local government can then stop the validity of HGU PTPN 8 by implementing the related law to avoid any land litigation issues from a company and community around the plantation lands. The release of land for public purposes has been practicing at certain areas of Cisarua in Bogor, Subang and Sukabumi in the West Java Province as well as at Helvetia, Percut Sei Tuan, Saentis and Kualanamu of Deli Serdang and the area surrounding the Medan city in the North Sumatra Province. An enclave model project of agricultural lands released from the PTPN must be initiated by the land bank institution due to the public housing projects to provide the affordable housing for LIP are initiated by the local government rather than the results of rui-slag done by the largest private companies (Zhou and Ronald, 2017).

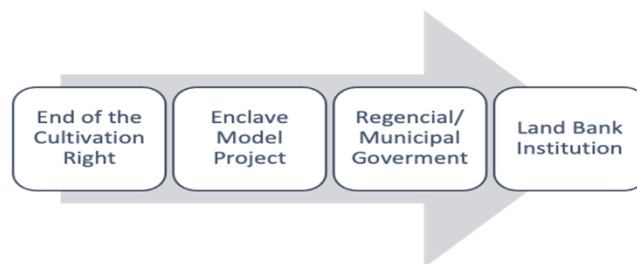


Fig. 4. Enclave model project of releasing the cultivation rights to LIP*

*Source: The community paradigm development model of house ownership separated from the land to accelerate the provision of affordable housing for LIP. Final Report, University of Djuanda, 2016.

Fig. 4 shows the successive steps of enclave model of HGU PTPN in the favor of redistributing many small pieces of lands to LIP by involving the land bank institution. In many cases of the Jabodetabek region, the illegal buildings such as hotel, villa and educational center can be built by the surrounding community during the rui-slag practice of plantation lands and therefore need to be regulated by the land bank institution to develop the ways of incorporating community safety within spatial planning and management policies.

Land release program for the development of affordable housing as part of the land bank program that deals with the transfer of plantation lands from the HGU owner to ensuring the social function of land and housing for LIP should be executed under the authority of regencial/municipal government after the HGU period expires. During the implementation of enclave model project of releasing the cultivation rights to LIP, it should not be directly submitted the released lands to many individuals but must be firstly identified and properly managed by the land bank institution.

2.2.6. Ulayat land

Ulayat land is a piece of the land that having an ulayat right of the customary law community over a particular land (Bedner and Van Huis, 2008). A customary law community is defined as group of people who are bounded by a particular treaty of customary law due to the customs at the location of their residence are bounded by their traditional inheritance rules. The ulayat right is a right given by the customary law community over a piece of land to the authority of particular customary law (Ifrani et al., 2019). With this authority allowing a customary community manages the rights to explore and exploit the natural resources as the stream of benefits generated from the land for survival. The constitutional rights of indigenous people in Indonesia are recognized from the UUPA No. 5/1960 which applies to earth, water and airspace. The relation between customary law community and ulayat land is comprehended from habitual life of sanctifying a particular land due to the traditional sacred land in defense of cultural survival, human rights and the environment is the foundation of such land management (Urano, 2014). An ulayat-owned land does not mean the land owned by a local government or individual but rather a customary law community.

The construction of house on the ulayat land has been already initiated before the independence of the Republic of Indonesia in the West Sumatra Province (De Royer et al., 2015). The Minangkabau people of West Sumatra have been already known with a family-owned property. In case of the ulayat land as a land care model can be used as the most feasible alternative because it may be possible to process the transfer of management rights of the ulayat land belonged to one family from a customary law community to the land bank institution.

It is suggested that an important role of the authorized indigenous non-formal leaders within a customary legal community can work closely with the land bank institution to obtain a statement letter of releasing the ulayat land for development of affordable housing to LIP.

The land bank institution as a special body formed by the local government to deal with the manage of lands in the whole of territory can be involved in the fair transfer of customary land rights in the implementation of land procurement for development in the public interest.

2.2.7. Land of the Jakarta bay reclamation

The reclamation project of Jakarta bay determining a long-term vision to handle the ecological conditions in the northern coastal area of Jakarta city has been started since 2016 without a first detailed examination of the short-term ramifications (Ajiwibowo and Pratama, 2018). The ads of Jakarta bay reclamation plan have been spreading to China, Europe, Hong Kong, Japan, Malaysia, Singapore and the United States of America (USA) (Minkman et al., 2019). The reclamation of Jakarta bay covering the development of 17 artificial islands has become a topic of heated debate during the gubernatorial election campaign in 2017. According to the Regional Regulation of DKI Jakarta No. 1/2012 on spatial plan 2030, the project of Jakarta bay reclamation, which adds 5100 ha of land nearly half the size of Bogor city to increase the area of Jakarta city, would benefit all Jakartans. The central government and the provincial government of DKI Jakarta have been called by the People’s Coalition for Fisheries Justice to annul all permits on the reclamation project of Jakarta bay due to the development of 17 artificial islands would not be beneficial to fishers along the Jakarta bay and has been considered as a form of the criminalization of fisherman by the developers. Instead, the DKI Jakarta provincial government has to fulfill the expectations of people to keep the conditions of clean and healthy bay and seas as the food barns for fisherman. A limited spatial allocation of the DKI Jakarta as one of the consequences of urbanization triggered the emergences of slum area and squatter settlements has demanded the need of new settlement area (Alzamil, 2018). The establishment of land bank institution served as the provincial government body authorized to manage a change of land use in DKI Jakarta Province may guarantee to supply enough lands for development of affordable housing to LIP and infrastructure of public interest. Fig. 5 shows the land tenure and land use planning of the Jakarta bay reclamation submitted to eight largest real estate private equity firms and the government of DKI Jakarta Province.

Referring to Article 33 paragraph (3) of the 1945 Constitution of ensuring general welfare of people is suggested that the role and responsibility of the DKI Jakarta provincial government is required to

provide at least 50% affordable housing for LIP. Land tenure by the provincial government is important to have the relationship that individuals and groups hold with respect to land and related resources of 17 artificial islands added to the territory of the DKI Jakarta Province. A land bank institution can express more favorable views of affordable housing development for LIP than a commercial real estate firm. However, the execution of Jakarta bay reclamation projects by eight giant developers is associated with the benefit plans related to the investment and business interests of the tycoons (see Fig. 6).

An incentive program in the development of Jakarta bay proposed by the DKI Jakarta provincial government may take a variety of the forms such as tax breaks, building supporting infrastructure, or workforce development to encourage the developers to voluntarily supply a part of their reclaimed lands for development of affordable housing for LIP. Or the government of DKI Jakarta Province by involving the land bank institution may buy part of the lands from the developers to provide enough lands for development of affordable housing for LIP and public facilities, according to UUPA No. 5/1960.

According to the above review of different land supply models in Indonesia, the role and responsibility of the land bank institution can involve in the management of the various existing models of land supply to provide enough lands with typical features of the regions for development of affordable housing to LIP and public infrastructure.

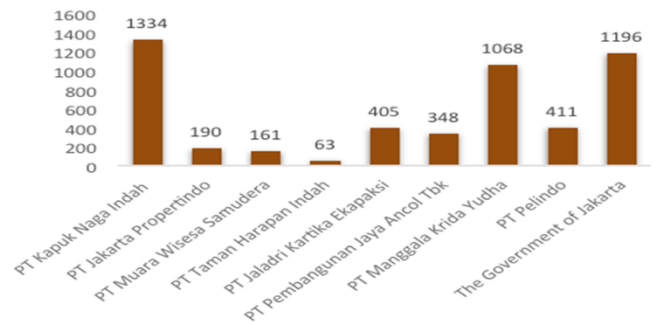


Fig. 6. Land tenure areas of the Jakarta bay reclamation*
*Source: The community paradigm development model of house ownership separated from the land to accelerate the provision of affordable housing for LIP. Final Report, University of Djuanda, 2016.



Fig. 5. Shared land of the Jakarta bay reclamation*
*Source: The community paradigm development model of house ownership separated from the land to accelerate the provision of affordable housing for LIP. Final Report, University of Djuanda, 2016.

Therefore, the proposed land bank model at the regencial/municipal, provincial and national levels should be adaptable to deal with the real conditions of the regions to simplify and expedite the disposition of underused, abandoned and foreclosed lands to achieve the benefits of public interest. The establishment of land bank model can be proposed as an essential social institution of the government that strikes a balance of the provision of lands for the development of affordable housing to LIP and public infrastructure closely associated with respect to the profit interest of the landlords. Deepening an understanding of the land use problems and conflicts in Indonesia by reviewing the land supply models and land tenure gives us a chance to discuss how the establishment of land bank institution is consistent with the regulations to meet the government's goals.

3. Results and discussion

Understanding the land use issues and the existing land tenure and supply models may facilitate effective discussion of describing the proposed land bank institution. The results and discussion of this study focus on the analysis of establishing a land bank institution, land acquisition, and affordable price of marketing the residential property in Indonesia. An appropriate land bank model may be suggested to deal with the construction of infrastructure for benefit of society and the development of affordable housing for LIP in the cities of Indonesia.

3.1. Land bank model

The aims of this section are to briefly review the existing land bank models, to analyze the establishment of land bank institution, to understand several considerations for the establishment of land bank and to identify the roles of land bank institution. The discussion of land bank model could be useful in analyzing the acquisition of land and the price affordable housing.

3.1.1. Brief overview of the existing land bank models

A literature review method of analyzing the land bank models adopted in the various countries can provide a framework for understanding the concept of land bank institution in Indonesia. The land bank of the Philippines is a financial institution owned by the Philippine government with a special focus on serving the needs of farmers and fishermen and is classified as a specialized government bank to address the financial system (Borras Jr, 2006; Nair, 2016). The establishment of land bank as a social institution associated with fragmented agricultural land ownership in Central Europe is suited for solving the problems of land fragmentation (van Dijk and Kopeva, 2006). Land bank as an important tool of sustainable urban land management serves to break the barriers to renewal of inner-city properties in the USA (Alexander, 2005). A land bank in Indonesia is proposed as the government social institution that strikes a balance in fulfilling its social mandate of promoting the land tenure reform for the provision of affordable housing development in the urban areas and the management of agricultural lands in the rural areas while remaining financially viable (see Fig. 7).

3.1.2. Analysis of the establishment of land bank institution

This study suggests that the government of Indonesia may officially establish the land bank institution to serve as state-owned entity in acquiring the vacant properties of abandoned houses, forgotten buildings, and empty lots due to the land bank system of multiple-use public land management does not exist yet. Fig. 7 shows the purposes of land bank institution established to ensure the provision of lands for achieving a sustainable land use management in the urban and rural areas. The state can acquire the abandoned lands that are not utilized by the landowners or the permit holders of lands within the years. It is expected that the land bank system contributes to solve the land management problems caused by abandoned small and scattered lands in the cities, aging landowners of abandoned lands, and the increase of

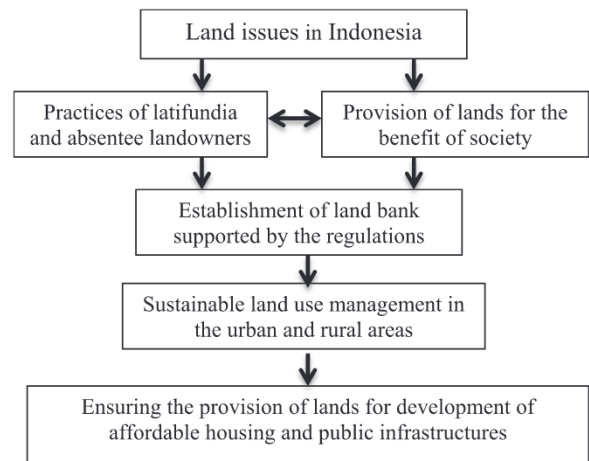


Fig. 7. Conceptual diagram of the proposed land bank institution.

absentee landowners in the rural and remote areas. Created a land bank is to secure the land tenure and property rights in the urban areas and to finance the acquisition and distribution of agricultural lands for division and resale to small landholders and to promote the purchase of land-holding by the tenant farmers of agricultural lands in the rural areas. The institutions of land bank established at the regencial and municipal levels can have the ability to respectively solve the typical problems of agricultural land management for ensuring the prosperity of small farmers in the rural areas and residential land management for ensuring the provision of affordable housing for LIP in the urban areas. The local government regulations of land management issued to follow the related statutory directions could be subjected to a number of emerging the land issues in each regency and municipality. Land banks are designed to acquire and maintain the price stability of lands (Aryeetey and Udry, 2010). The land tenure issues in a structured real estate development of the residential buildings need to be resolved by transferring back to the responsible ownership and productive use to meet the local land use goals and priorities (Briassoulis, 2019). In the establishment of land bank institution regulated in PP No. 64/2021 concerning the land bank agency is required to consider the existed land transformation models, legal basis, and institutional levels to define the specific roles of being associated with the provision of lands for public benefit purposes. It is suggested that the establishment of land bank institution can help the provincial government to assess and manage the risk and benefit of providing affordable housing for LIP at the areas of 17 artificial islands reclaimed as the new territory of DKI Jakarta Province.

3.1.3. Some considerations for establishing a land bank

The land bank model has been recognized for the provision of affordable residential and settlement lands for LIP in the urban areas by creating an environment ready to build and an area ready to build. State-owned enterprise of the Perum Perumnas has worked with a land bank model under supervision of the Ministry of Public Works and Housing (MPWH) to supply the lands for the development of affordable housing for LIP in two provinces of East Java and Banten by providing the residential lands of 400 ha at Driyorejo in Gresik of East Java Province in 2014 and 144 ha at Cengkareng of Banten Province in 2013. The land acquisitions of 500 ha in Jakarta city for the Pulogadung Industrial Estate in 1973 and 245 ha in Surabaya city for the Surabaya Industrial Estate of Rungkut in 1974 have been effective in the provision of lands for the development of affordable housing to LIP in two big cities. This land-tenure based model was followed by the development of residential and industrial estates owned by the central and local governments becoming an embryo of land bank model in Indonesia. Land bank institutions can basically serve as the means of providing the lands with the support of leveraging multiple funding sources (White et al., 2012).

Acquisition of land can be solved using the land bank model to support the provision of lands in the development of industrial estate (Mukerji, 2017). Any speculative activities that can threaten the supply of affordable housing for LIP must be avoided in favor of staying the land tenure arrangement regulated by a presidential decree to possibly create a more efficient and effective land management system (Fatta, 2014). Created a land bank institution in Indonesia as the legal entity for sustainable land management must be funded by either local or central government budget and is a public authority operated to efficiently hold, manage, and develop the tax-foreclosed properties.

Land bank institution as the governmental entity or nonprofit corporation can be established at the national, provincial and regencial/municipal levels and is assigned with the responsibility and authority to focus on the conversion of vacant, abandoned and tax delinquent lands into a productive use (Alexander, 2005). Types of the land bank institution can be created in the form of either government agency, state-owned enterprise or public service agency associated with the legal basis, legal body, and scope of work as described in Table 1. Legal basis for the establishment of land bank institution in Indonesia must be based on the Law of the Republic of Indonesia (UU) or the Government Regulation of the Republic of Indonesia recognized as the Law

Table 1
Types of the land bank institution in Indonesia*.

Type	Legal basis	Legal body	Scope of work
Government agency	PP No. 27/2014 on state/regional-owned property management	Ministry of Agrarian Affairs and Spatial Planning/ National Land Agency	(1) to regulate the planning, designation, use, acquisition, and consolidation of lands and (2) to regulate the selling of lands encountered barriers in accordance with the provision of state assets.
State-owned enterprise	UU No. 40/2007 on limited liability company. UU No. 19/2003 on state-owned enterprises, juncto PP No. 45/2005 on state enterprise establishment, management, supervisions and dissolution.	Central land bank company	(1) to arrange the planning, designation, use, acquisition and consolidation of lands, (2) to remove and transfer the lands and (3) to place the property in form of income into company (inbreng) or to into profit-driven rights management and profitability concession contract like cultivation rights.
Public service agency	PP No. 23/2005 on financial management of public service agency as amended by PP No. 74/2012.	Land public service agency	(1) to arrange the planning, designation, use, acquisition of lands, (2) to consolidate, to remove and to transfer the lands and (3) to replace the lands and to make the land use concessions with a nonprofit use agreement.

*Sources: (1) PP No. 27/2014 on state/regional-owned property management, (2) UU No. 40/2007 on limited liability company, (3) UU No. 19/2003 on state-owned enterprises, (4) PP No. 45/2005 on state enterprise establishment, management, supervisions and dissolution, and (5) PP No. 74/2012 on financial management of public service agency.

Substitution.

The establishment of land bank institution as a legal entity engaged in land acquisition must be equipped with a professional team and a strong capital base to encouragingly reduce the negative externalities of lands and properties in Indonesia (Whitaker and Fitzpatrick IV, 2016). The source of financing a land bank institution can be allocated part from state budget and part of budget from service charge contribution to have been considered the land price fluctuations from the year to year. The effectiveness of land bank working system is seen in the speed and accuracy of acquiring lands for development of either affordable housing or infrastructure for public interest due to the fluctuation of land price would be dependent on the value of houses and buildings at nearby locations (Zhuang and Zhao, 2014). Legal entity of the land bank can be established based on Act for the urban and rural areas (Alexander, 2005). A land bank institution must be separated from other government agencies to avoiding the political and business interests (Berdell, 2017) and has a typical responsibility to return the land and property to a productive use, which is not handled by other government institutions. It is suggested that a land bank institution can be named with the reliable name such as the National Public Service Agency at national level, Provincial Public Service Agency at provincial level and Regencial/-Municipal Public Service Agency at regencial/municipal level. The role and responsibility of the land bank institution at each level of administration should have been assigned in PP No. 64/2021 to allow the supply of land to an appropriate use of the available productive lands.

3.1.4. Roles of the land bank institution

The establishment of land bank institutions is required for strengthening the national development in the implementation of constitutional rights and is very urgent for the execution of more just and prosperous spatial and regional planning plan (Busroh and Santiago, 2017; Mycoo, 2017). Land bank institution has the main roles to inventory, plan, implement, control and notify all stakeholders who hold a land tenure for any area (Marey-Pérez et al., 2014). According to the UUPA No. 5/1960, the obligation of land bank institution is assigned to bear the state responsibility for realizing the welfare of all its citizens and shall at all times ensure fair and equitable, based on the spirit of Article 33 paragraph (3) of the 1945 Constitution. The implication of establishing the land bank institutions may accommodate all land use needs for the developments of road, highway, dam, market, hospital, school, office, sport facility, port, airport, etc., to support the realization of the various public infrastructures. However, the land bank institution might face challenges in carrying out duties as the primary land use control authority of the country, notably the need for better cooperation with the partner institutions, and must consider a sensitive issue as being particularly prone to conflict.

The topic issues of land management should identify the main ideas of establishing a land bank institution. The procedure of land procurement for development of public interest should be clear. Regarding the economic, social and cultural rights of local people must be considered to get a view on the pros and cons of the process of land acquisition (Abbink, 2011). The implementation of good governance in land tenure and administration needs to be improved the concept of sustainable land management by involving the land bank institution for avoiding any dispute and delay in the process of land acquisition (see Fig. 7). The land management paradigm in mindset of some Indonesian people being considered certain parts of the lands as sacred, sensitive and magical religion drives the land management systems dealing with the land rights, restrictions, and responsibilities to support the development of public infrastructures (Stringer et al., 2017). However, the land of being treated as an object of the investments and speculative activities to have been tolerated by some individuals would take a lot of energy and conscientiousness to reprogram the subconscious mind, which would result in the paradigm changes. The procurement of land for any purpose cannot be separated from a conflict and is the subject that cannot be solved with a competent authority in the scientific discipline. Therefore,

it is necessary to establish the land bank institution with a part of its roles to manage the land procurement for public interest based on the principles of legal certainty.

The policy of government referred to the socio-cultural and religious beliefs in certain cases of land management may help safeguard the forest and water resources through sustainable land, water and forest management associated with the role of land bank institution for development of more just spatial plan to all people. The management of lands in many regions of Indonesia is unique and specific and has a socio-cultural even mystical and religious relationship. Therefore, the land management system supported by the land bank institution does recognize some customary laws which have the sources in diverse traditional customs of land management, such as Subak land management in Bali Province, Swapraja land management in Special Province of Yogyakarta, Dalihan Natolu land management in Tapanuli of North Sumatra Province, and Tanah Ulayat land management in West Sumatra Province. The establishment of land bank institution to execute the legal process of acquiring the lands of individual citizens or organizations for any purpose can meet the minimum standards for a land acquisition with its roles: (1) as land keeper, the land bank institution can collect the data of land such as land tenure, land ownership and land use planning. All data must be accurate, factual and complete, (2) as land warrantor, the land bank institution must pay attention to the planning periods of national and local spatial plans because it has the responsibility to control the land procurement procedures and processes either by trading, exchange or disposal of right, (3) as land price controller, the land bank institution must ensure the market penetration strategy to prevent the control of land by any particular groups, (4) as property valuer, the land bank institution must prepare the value range pricing strategy of property to compensate the speculators for use of the limited availability of land for public interest in urban areas due to Indonesia has for some decades faced a progressively limited availability of land for public interest, (5) as land distributor, the land bank institution can engage in the distribution of land for the construction of affordable infrastructure and housing to ensure that the land insurance can be obtained by owners to have a suitability of investment in the marketable securities, and (6) as land manager, the land bank institution can manage the storage, determination, planning, use and supply of the lands in order to organize the provision of lands for all land use needs to avoid any speculations.

Land bank must focus to not only on the provision of lands for infrastructure and public utilities but can also be directed to the importance of land provision for development of affordable housing for LIP. In the broadest view, there are three phases of land acquisition: preparation, implementation, and control (Moyo, 2011; Tagliarino et al., 2018). Land bank institution must be familiar with the license to acquire a property with the detailed spatial plan, occupied area and infrastructure development and has a key role to hold the control data generated by three main activities of the provision, maturation, and distribution of the lands for any purposes (Fulazzaky and Akil, 2009). There are four ways to acquire the land resources: consolidation, buying and selling, exchange, and disposal of property rights. The political economy of land market can be made according to the land supply model managed by the land bank institution to acquire enough lands, which is dependent on the government agenda (Li et al., 2015), and must be legally justified in the provision of lands for development of affordable housing for LIP to avoid any practices of latifundia and absentee landowners (see Fig. 7). The establishment of land bank institutions strikes a balance in fulfilling its social mandate of promoting affordable housing development and is required at the regencial/municipal, provincial and national levels in Indonesia. It is suggested that the existence of land bank institutions plays an important role in handling the land acquisition activities and can help overcome the barriers of the land and housing price speculations.

3.2. Land acquisition

The land acquisition policy has to explain the rules of voluntary and compulsory acquisition assigned to the land bank institution for acquiring the rights of land and buildings dealing with a landowner in relation to state the significant resource project. A voluntary acquisition of lands is the acquisition right assigned to landholders for releasing their property consisting of land and buildings to support the substantial economic and social benefits of good land administration. A compulsory acquisition of lands is the power of the local authorities or central government delegated to the land bank institution to acquire the rights in the land and buildings without the willing consent of landowners for the benefit of society. The compulsory acquisition of land is increasingly important due to the rapid economic growth of Indonesia causes a change in the land use over time and has always been a delicate issue affecting the decisions of land-use allocation (Shi et al., 2018). One of the land bank responsibilities is to acquire the lands according to the spatial planning policy to plan, provide, designate, and use of the land surface for specific purposes. The arrangement of land, land consolidation, and housing development for LIP in the urban areas has been set to the status of controlled rental housing according to the Law No. 2/2012 on land procurement for the construction of public utilities. The local tax object sale value may be an option for helping the land bank institution in determining the base price of lands to be socialized to people who have the lands of being acquired by a transaction processing model for buying and selling, or exemption of the property rights (Posner and Weyl, 2017). The role of land bank institution may resolve many toughest barriers of land acquisition to avoid any speculations with a thoughtfully execution. An analysis of the economic determinants of affordable housing prices provides an insight into the importance of land bank institution ruled the house price and landless households to gain better acceptance of land acquisition for improved people welfare standards.

3.3. Analysis of affordable housing

The goal of this section is to analyze the prices of affordable housing that have been set by the government and the simulation of landless housing prices in the region of Jabodetabek to get better understanding on the economic benefit of sustainable land management by involving the land bank institution. The role of land bank institution is required to resolve many barriers of the land and housing price speculations by the developers.

3.3.1. House price

The government of Indonesia has determined two types of affordable housing: tread house residence and flat residence (Widoyoko, 2007). The price of tread houses and flats has been regulated by the Decree of the MPWH No. 552/KPTS/M/2016 at an affordable price in all regions

Table 2

The prices of affordable housing set by the Decree of Minister of Public Works and Housing for the years: 2016, 2017 and 2018*.

Region	Selling price by year (IDR)		
	2016	2017	2018
Java, except Jabodetabek	116.500.000	123.000.000	130.000.000
Sumatra	116.500.000	123.000.000	130.000.000
Kalimantan	128.000.000	135.000.000	142.000.000
Celebes	122.500.000	129.000.000	136.000.000
Moluccas	133.500.000	141.000.000	148.500.000
Bali and Nusa Tenggara	133.500.000	141.000.000	148.500.000
Papua and West Papua	183.500.000	193.500.000	205.000.000
Riau islands and Bangka Belitung	122.500.000	129.000.000	136.000.000
Jabodetabek	133.500.000	141.000.000	148.500.000

*Source: Decree of Minister of Public Works and Housing No. 552/KPTS/M/2016 dated on July 28, 2016. Noted that 1 USD = 14,000 IDR.

of Indonesia, as shown in Tables 2 and 3. Real prices of affordable housing differently react to the economic growth depending on many factors such as cost of construction, growth rate of underlying population, real income in the area, and size of the house. A difference in the house prices among the regions of Indonesia is dependent upon the demand and supply conditions and could be partially caused by the differences in wages (Glindro et al., 2011). Table 2 shows the average prosperous house price rising by more than 5% year-over-year from 2016 to 2018. The most expensive prosperous house in the country was sold in the Papua and West Papua regions for IDR 205,000,000 in 2018. The role of the local and central governments in controlling the price of decent house for LIP has expanded over the years and influenced by the political policies. The most direct way of the government to relieve the housing cost burdens for LIP is by giving some subsidies including the subsidy of land.

Table 3 shows that the average prosperous flat prices per m² or per unit are different from one province to others depending on the prices of lands and building materials. The most expensive prosperous flat per m² in Indonesia was sold in the Papua Province for IDR 15,700,000, then West Papua Province for IDR 10,700,000 and then Riau Islands Province

Table 3

The prices of flat per m² or per unit set in 2016 by the Decree of Minister of Public Works and Housing*.

Province/city/regency	Price by (IDR)	
	(m ²)	(unit)
Aceh	8500,000	306,000,000
North Sumatera	7800,000	280,800,000
West Sumatera	8800,000	316,800,000
Riau	9500,000	342,000,000
Riau Islands	10,000,000	360,000,000
Jambi	8800,000	316,800,000
Bengkulu	8000,000	288,000,000
South Sumatera	8700,000	313,200,000
Bangka Belitung	8900,000	320,400,000
Lampung	8000,000	288,000,000
Banten, except South Tangerang City and Tangerang Regency	7600,000	273,600,000
West Java, except Depok City, Bogor City, Bogor Regency, Bekasi City and Bekasi Regency	7300,000	262,800,000
Central Java	7200,000	259,200,000
DIY Yogyakarta	7300,000	262,800,000
East Java	7900,000	284,400,000
Bali	8300,000	298,800,000
West Nusa Tenggara	7400,000	266,400,000
East Nusa Tenggara	8600,000	309,600,000
West Kalimantan	9700,000	349,200,000
Central Kalimantan	9400,000	338,400,000
South Kalimantan	9800,000	352,800,000
East Kalimantan	9900,000	356,400,000
North Kalimantan	9000,000	324,000,000
South Sulawesi	7800,000	280,800,000
Gorontalo	8300,000	298,800,000
Center Sulawesi	6900,000	248,400,000
South East Sulawesi	8200,000	295,200,000
West Sulawesi	8700,000	313,200,000
South Sulawesi	7300,000	262,800,000
Maluku	7600,000	273,600,000
North Maluku	9600,000	345,600,000
Papua	15,700,000	565,200,000
West Papua	10,700,000	385,200,000
West Jakarta	8900,000	320,400,000
South Jakarta	9200,000	331,200,000
East Jakarta	8800,000	316,800,000
North Jakarta	9600,000	345,600,000
Center Jakarta	9300,000	334,800,000
South Tangerang City and Tangerang Regency	8400,000	302,400,000
Depok City	8500,000	306,000,000
Bogor City and Bogor Regency	8600,000	309,600,000
Bekasi City and Bekasi Regency	8400,000	302,400,000

*Source: Decree of Minister of Public Works and Housing No. 552/KPTS/M/2016 dated on July 28, 2016. Noted that 1 USD = 14,000 IDR.

for IDR 10,000,000 in 2016. Basically, the MPWH authority may have enough budgets by making a request to the President to build many reasonably priced decent flats over the whole country in order to control the price of affordable housing for LIP in the urban areas.

The development of the principles of property ownership in urban area should have a right to practice the scheme of mergers in the ownership of house and land by one owner (Fawaz and Moumtaz, 2017). One unit of flat residence can get a portion of land in accordance with a proportional comparison value to each owner of shared multidwelling building. The application of vertical attachment principles has been experienced resulting in a heavy burden for LIP because it needs to pay the prices of land and housing environment in order to bear all investment costs raised by the developers (Ball, 1994). Consequently, the price of decent house is becoming increasingly expensive for LIP in the urban areas to contribute to an increase in the housing backlog within a multidwelling building. In this case, the role of local government may be involved in releasing any targeted land from its owner for the development of decent flat with an affordable price for LIP.

3.3.2. Landless households

The landless households refer to privately-owned house detached from a legal regime of lands in the case of only horizontal separation where the ownership of house is different from landowner (Howard-Hassmann, 2013; Khamaisi, 1995). The issues of landless households for the people who living in flat/apartment building can be investigated by granting full individual ownership of one dwelling unit within an apartment building with an undivided ownership interest in the land and other components of building shared in common with other owners of dwelling units in the building that known as communal right of the land (Antonio and Griffith-Charles, 2019; Wittayapak and Baird, 2018). The people who own or rent a dwelling unit in the apartment building do not have an ownership of the limited land due to one part of land has been used to build many dwelling units of the apartment building and other part of land used for public facilities. Legal certainty of the property ownership to foreigners can be assured in context from reliable sources by a registered deed to the property (Chhibber and Majumdar, 1999). Even though the people living in an apartment building is not traditionally practiced in Indonesia, the tendency of people in the big cities to buy and live in a dwelling unit of the apartment building will increase from the year to year due to the implications of population growth and urbanization for competitive demands for the use of land. Legal model of property ownership can be developed for the provision of affordable housing for LIP. The establishment of land bank institutions can help the government to solve the issues of landless households by introducing a shared-ownership scheme of land and building usage. The possibility of obtaining the land supply to a land bank arrangement for the development of affordable housing does not ask to LIP to buy the land even though it is not popular in the eyes of many housing developers. It has been argued that most developers have a motivation to get only small profit from the services of land sales but are basically taking the profits as much as possible from the price of land (Austin, 2010). The government is overwhelmed to provide the land for the development of public infrastructures due to the land tenure by the small group of the country's giant developers has been violating the principles of latifundia and absentee landowner as mentioned in the UUPA No. 5/1960. The involvement of land bank institution is needed to control the price of land provided for the development of landless housing for LIP. Table 4 shows the simulation of land prices by playing the role of land bank institution as the land provider for the development of affordable housing for LIP.

The development of five-story residential building to avoid a long elevator ride was referenced to calculate the prices of one dwelling unit within a multidwelling building (Al-Kodmany, 2015). One dwelling unit has a floor space of 36 m² to divide it into two bedrooms, one living room, one dining room, and one kitchen. Establishing a reasonable land price for the Jabodetabek region as shown in Table 4 was calculated

Table 4
Simulation of landless housing prices in the Jabodetabek region*.

City/Regency	House price based on the vertical accession principle by (IDR)		House price based on the horizontal separation principle by (IDR)		Saving (%)
	(m ²)	(unit)	(m ²)	(unit)	
West Jakarta	8900,000	320,400,000	4,000,000	144,000,000	55.06
South Jakarta	9200,000	331,200,000	4500,000	162,000,000	51.09
East Jakarta	8800,000	316,800,000	4,000,000	144,000,000	54.55
North Jakarta	9600,000	345,600,000	4500,000	162,000,000	53.13
Center Jakarta	9300,000	334,800,000	4500,000	162,000,000	51.61
South Tangerang City and Tangerang Regency	8400,000	302,400,000	3800,000	136,800,000	54.76
Depok City	8500,000	306,000,000	3800,000	136,800,000	55.29
Bogor City and Bogor Regency	8600,000	309,600,000	3800,000	136,800,000	55.81
Bekasi City and Bekasi Regency	8400,000	302,400,000	3800,000	136,800,000	54.76

*Source: The community paradigm development model of house ownership separated from the land to accelerate the provision of affordable housing for LIP. Final Report, University of Djuanda, 2016. Noted that 1 USD = 14,000 IDR.

based on the average cost of one dwelling unit to build a five-story residential building. The property of one residential dwelling unit can be bought with an ownership title for a sales price of such as IDR 136,800,000 (IDR 3800,000 per m²) based on the simulation of one dwelling unit price in accordance with the horizontal separation principle. Using the quality building materials in the construction of multidwelling building, whether they are first or second quality certified materials, can have the lifespan of five-story residential building over 60 years. By comparing the sales price (see Table 4) of one dwelling unit constructed based on the vertical accession principle to that constructed based on the horizontal separation principle can save more than 50% of income toward the necessity of affordable housing. Therefore, the involvement of land bank institution can help the government to properly manage the provision of lands in the Jabodetabek region for development of affordable housing for LIP. The accessibility of lands can reduce the housing backlog to LIP in line with the nation goals to achieve a better and more sustainable future for all citizens to enjoy peace and prosperity.

4. Conclusions

The acquisition of lands for construction of public infrastructures and development of affordable housing for LIP is an urgent need to achieve social justice and prosperity of society. The land use issues and adopted land supply models of Indonesia were reviewed to gain a better understanding of the importance of land bank institution in encouraging the most sustainable land management. The establishment of land bank institution was suggested as an effective way of reducing the practices of latifundia and absentee landowners and accommodating the various administrative statuses of land supply models. The price of affordable home depended on the demand and supply conditions, price of lands, and building materials can be reduced through an elaborate system of land subsidies. An analysis of the landless housing prices for development of five-story residential building in the Jabodetabek region can save more than 50% of income toward the necessity of affordable housing for LIP. It is recommended that the establishment of land bank institution by the provincial government of DKI Jakarta is urgent for the development of a more just and prosperous spatial and land use plan in the future. The land bank may institute the various rules to promote the policy goals of suppressing land speculation by increasing the housing supply and adjusting the house price for LIP within a land administration system. The reliability of land bank reviewed in the case of Indonesia may contribute to the future direction of sustainable land management for the achievement of social justice mirrored prosperity of society. The findings of this study may have significant policy implications for the future land use and land management practices.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors are unable or have chosen not to specify which data has been used.

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References

- Abbink, J., 2011. Land to the foreigners: economic, legal, and socio-cultural aspects of new land acquisition schemes in Ethiopia. *J. Contemp. Afr. Stud.* 29, 513–535.
- Ajiwibowo, H., Pratama, M.B., 2018. The influence of the Jakarta bay reclamation on the surrounding tidal elevation and tidal current. *Int. J. GEOMATE* 15, 55–65.
- Akinola, A.O., 2018. Women, culture and Africa's land reform agenda. *Front Psychol.* 9, 2234.
- Akram, M.W., Akram, N., Hongshu, W., Andleeb, S., ur Rehman, K., Kashif, U., Mehmood, A., 2019. Impact of land use rights on the investment and efficiency of organic farming. *Sustainability* 11, 7148.
- Alexander, F.S., 2005. Land bank strategies for renewing urban land. *J. Afford. Hous. Commun. Dev. Law* 14, 140–169.
- Al-Kodmany, K., 2015. Tall buildings and elevators: a review of recent technological advances. *Buildings* 5, 1070–1104.
- Alzamil, W.S., 2018. Evaluating urban status of informal settlements in Indonesia: A comparative analysis of three case studies in North Jakarta. *J. Sustain. Dev.* 11, 148.
- Antonio, W., Griffith-Charles, C., 2019. Achieving land development benefits on customary/communal land. *Land Use Policy* 83, 124–133.
- Aryeetey, E., Udry, C., 2010. Creating property rights: land banks in Ghana. *Am. Econ. Rev.* 100, 130–134.
- Austin, G., 2010. African economic development and colonial legacies. *Int. Dev. Policy* 1, 11–32.
- Axinn, W.G., Ghimire, D.J., 2011. Social organization, population, and land use. *Am. J. Sociol.* 117, 209–258.
- Ball, M., 1994. The 1980s property boom. *Environ. Plan. A* 26, 671–695.
- Barbier, E.B., Hochard, J.P., 2016. Does land degradation increase poverty in developing countries? *PLoS One* 11, e0152973.
- Barca, F., McCann, P., Rodríguez-Pose, A., 2012. The case for regional development intervention: place-based versus place-neutral approaches. *J. Reg. Sci.* 52, 134–154.
- Bedner, A., Arizona, Y., 2019. Adat in Indonesian Land Law: A promise for the future or a dead end? *Asia Pac. J. Anthr.* 20, 416–434.

- Bedner, A., Van Huis, S., 2008. The return of the native in Indonesian law: indigenous communities in Indonesian legislation. *J. Human. Soc. Sci. Southeast Asia Ocean*. 164, 165–193.
- Beng-Huat, C., 1996. Private Ownership of Public Housing in Singapore. Working Paper No. 63. Murdoch University.
- Berdell, J., 2017. The structure and stability of John Law's early land bank proposals. *Oeconomia* 7, 459–479.
- Borras Jr, S.M., 2006. Redistributive land reform in 'public' (forest) lands? Lessons from the Philippines and their implications for land reform theory and practice. *Prog. Dev. Stud.* 6, 123–145.
- Briassoulis, H., 2019. Combating land degradation and desertification: the land-use planning quandary. *Land* 8, 27.
- Busroh, F.F., Santiago, F., 2017. The establishment of land bank institutions for strengthening the national development. *Int. J. Civ. Eng. Technol.* 8, 720–732.
- Chaves, L.F., 2013. The dynamics of latifundia formation. *PLoS ONE* 8, e82863.
- Chhibber, P.K., Majumdar, S.K., 1999. Foreign ownership and profitability: property rights, control, and the performance of firms in Indian industry. *J. Law Econ.* 42, 209–238.
- Chirisa, I.E.W., Kawadza, S.T., Bandaiko, E., 2014. Answering to the domesticability of exotic options and strategies in managing Africa's urban landscapes for sustainability beyond 2015. Springerplus 3, 241.
- Coiacetto, E., 2009. Industry structure in real estate development: is city building competitive? *Urb. Policy Res* 27, 117–135.
- Cotterrell, R., 2000. Common law approaches to the relationship between law and morality. *Ethic.-. Theo. Moral Pr.* 3, 9–26.
- De Royer, S., Visser, L.E., Galudra, G., Pradhan, U., Van Noordwijk, M., 2015. Self-identification of indigenous people in post independence Indonesia: a historical analysis in the context of REDD. *Int. For. Rev.* 17, 282–297.
- Elmanisa, A., Kartiva, A., Fernando, A., Arianto, R., Winarso, H., Zulkaidi, D., 2017. Land price mapping of Jabodetabek, Indonesia. *Geoplan.: J. Geomat. Plan.* 4, 53–62.
- Fatta, G., 2014. The Effect of Land Speculation on the Housing in the City of Jeddah. Thesis: Master of Urban Planning, Ball State University, Muncie, Indiana.
- Fawaz, M., Moutamz, N., 2017. Of property and planning: a brief introduction. *Plan. Theo. Pract.* 18, 345–350.
- Fulazzaky, M.A., 2009. Water quality evaluation system to assess the Brantas River water. *Water Resour. Manag.* 23, 3019–3033.
- Fulazzaky, M.A., 2010. Water quality evaluation system to assess the status and the suitability of the Citarum river water to different uses. *Environ. Monit. Assess.* 168, 669–684.
- Fulazzaky, M.A., 2017. Participation of farmers in irrigation water management in Indonesia: a review. *Irrig. Drain.* 66, 182–191.
- Fulazzaky, M.A., Akil, H., 2009. Development of data and information centre system to improve water resources management in Indonesia. *Water Resour. Manag.* 23, 1055–1066.
- Fulazzaky, M.A., Gany, A.H.A., 2009. Challenges of soil erosion and sludge management for sustainable development in Indonesia. *J. Environ. Manag.* 90, 2387–2392.
- Gaveau, D.L.A., Sheil, D., Husnayaen, S., Arjasakusuma, S., Ancrenaz, M., Pacheco, P., Meijaard, E., 2016. Rapid conversions and avoided deforestation: examining four decades of industrial plantation expansion in Borneo. *Sci. Rep.* 6, 32017.
- Ghatak, M., Mookherjee, D., 2014. Land acquisition for industrialization and compensation of displaced farmers. *J. Dev. Econ.* 110, 303–312.
- Glindro, E.T., Subhanij, T., Sseto, J., Zhu, H., 2011. Determinants of house prices in nine Asia-Pacific economies. *Int. J. Cent. Bank.* 7, 163–204.
- Gray, M., Barford, A., 2018. The depths of the cuts: the uneven geography of local government austerity. *Camb. J. Reg. Econ. Soc.* 11, 541–563.
- Hazell, P., Wood, S., 2008. Drivers of change in global agriculture. *Philos. Trans. R. Soc. Lond. B Biol. Sci.* 363, 495–515.
- Hefner, R.W., 2016. Indonesia, Islam, and the New US Administration. *Rev. Faith. Int. Aff.* 14, 59–66.
- Howard-Hassmann, R.E., 2013. Reconsidering the right to own property. *J. Hum. Righ* 12, 180–197.
- Ifrani, Abby, F.A., Barkatullah, A.H., Nurhayati, Y., Said, M.Y., 2019. Forest management based on local culture of Dayak Kotabaru in the perspective of customary law for a sustainable future and prosperity of the local community. *Resources* 8, 78.
- Ilorah, R., 2009. Ethnic bias, favouritism and development in Africa. *Dev. South. Afr.* 26, 695–707.
- Jaquet, S., Kohler, T., Schwilch, G., 2019. Labour migration in the middle hills of Nepal: consequences on land management strategies. *Sustainability* 11, 1349.
- Jawad, S., Ledwith, A., Panahifar, F., 2018. Enablers and barriers to the successful implementation of project control systems in the petroleum and chemical industry. *Int. J. Eng. Bus. Manag.* 10, 1–13.
- Jayanthi, G.D., Damayanti, S.M., 2015. Feasibility analysis of New Priok Port Project Phase-2 of Indonesia Port Corporation II. *J. Bus. Manag.* 4, 594–605.
- Jones, R., 2009. Sovereignty and statelessness in the border enclaves of India and Bangladesh. *Polit. Geogr.* 28, 373–381.
- Kendall, R., Tulip, P., 2018. The Effect of Zoning on Housing Prices, Research Discussion Papers RDP 2018–03, Reserve Bank of Australia.
- Khamaisi, R., 1995. Land ownership as a determinant in the formation of residential areas in Arab localities. *Geoforum* 26, 211–224.
- Khan, M.H., 2001. Agricultural taxation in developing countries: a survey of issues and policy. *Agric. Econ.* 24, 315–328.
- Kooy, M., Walter, C.T., 2019. Towards a situated urban political ecology analysis of packaged drinking water supply. *Water* 11, 225.
- Lee, J., Smith, J.P., 2009. Work, retirement, and depression. *J. Popul. Ageing* 2, 57–71.
- Li, L.-H., Wong, S.K.K., Cheung, K.S., 2015. Land supply and housing prices in Hong Kong: the political economy of urban land policy. *Environ. Plan. C: Polit. Space* 34, 981–998.
- Li, S., Li, X., 2017. Global understanding of farmland abandonment: a review and prospects. *J. Geogr. Sci.* 27, 1123–1150.
- Maestas, N., 2010. Back to work: expectations and realizations of work after retirement. *J. Hum. Resour.* 45, 718–748.
- Marey-Pérez, M.F., Calvo-González, A., Domínguez-Torres, G., 2014. Are the communal forest owners involved in the management of their lands? A qualitative analysis for the case of Galicia (Spain). *Bosque* 35, 207–215.
- Minkman, E., Letitre, P., van Buuren, A., 2019. Reconstructing the impasse in the transfer of delta plans: evaluating the translation of Dutch water management strategies to Jakarta, Indonesia. *J. Environ. Plan. Manag.* <https://doi.org/10.1080/09640568.2018.1527216>.
- Monkkonen, P., 2013. Urban land-use regulations and housing markets in developing countries: Evidence from Indonesia on the importance of enforcement. *Land Use Policy* 34, 255–264.
- Moyo, S., 2011. Three decades of agrarian reform in Zimbabwe. *J. Peasant Stud.* 38, 493–531.
- Mukerji, S., 2017. Land acquisition in contemporary India: the growth agenda, legislation and resistance. *Indian J. Public Admin* 63, 85–103.
- Mycos, M.A., 2017. Reforming spatial planning in anglophone Caribbean countries. *Plan. Theo. Pract.* 8, 89–108.
- Nair, V.P., 2016. Eschewing cash: The challenges of cashless transactions in the Philippines. *J. Southeast Asian Econ.* 33, 387–397.
- Nasution, A., 2016. Government Decentralization Program in Indonesia. ADBI Working Paper 601, Tokyo: Asian Development Bank Institute.
- Page, S.E., Hooijer, A., 2016. In the line of fire: the peatlands of Southeast Asia. *Philos. Trans. R. Soc. Lond. B Biol. Sci.* 371, 20150176.
- Paulino, E.T., 2014. The agricultural, environmental and socio-political repercussions of Brazil's land governance system. *Land Use Policy* 36, 134–144.
- Pillay, J., 2017. The church as a transformation and change agent. *HTS Teol. Stud.* 73, 1–12.
- Posner, E.A., Weyl, E.G., 2017. Property is only another name for monopoly. *J. Leg. Anal.* 9, 51–123.
- Power, T.P., 2018. Jokowi's authoritarian turn and Indonesia's democratic decline. *Bull. Indo. Econ. Stud.* 54, 307–338.
- Rahadi, R.A., Wiryono, S.K., Koesrindartoto, D.P., Syamwil, I.B., 2013. Attributes influencing housing product value and price in Jakarta Metropolitan Region. *Proc. Social. Behav. Sci.* 101, 368–378.
- Rakodi, C., Firman, T., 2009. Planning for an Extended Metropolitan Region In Asia: Jakarta, Indonesia. Case study prepared for the Global Report on Human Settlements 2009. UN-Habitat.
- Riggs, R.A., Sayer, J., Margules, C., Boedhihartono, A.K., Langston, J.D., Sutanto, H., 2016. Forest tenure and conflict in Indonesia: Contested rights in Rempek Village, Lombok. *Land Use Policy* 57, 241–249.
- Roestamy, M., Fulazzaky, M.A., 2021. A review of the water resources management for the Brantas River basin: challenges in the transition to an integrated water resources management. *Environ. Dev. Sustain.* <https://doi.org/10.1007/s10668-021-01933-9>.
- Satterthwaite, D., McGranahan, G., Tacoli, C., 2010. Urbanization and its implications for food and farming. *Philos. Trans. R. Soc. Lond. B Biol. Sci.* 365, 2809–2820.
- Shi, G., Jiang, N., Yao, L., 2018. Land use and cover change during the rapid economic growth period from 1990 to 2010: A case study of Shanghai. *Sustainability* 10, 426.
- Shigetomi, Y., Ishimura, Y., Yamamoto, Y., 2020. Trends in global dependency on the Indonesian palm oil and resultant environmental impacts. *Sci. Rep.* 10, 20624.
- Stringer, L.C., Reed, M.S., Fleskens, L., Thomas, R.J., Le, Q.B., Pritchard, T.L., 2017. A new dryland development paradigm grounded in empirical analysis of dryland systems science. *Land Degrad. Dev.* 28, 1952–1961.
- Surya, B., Ahmad, D.N.A., Sakti, H.H., Sahban, H., 2020. Land use change, spatial interaction, and sustainable development in the Metropolitan Urban Areas, South Sulawesi Province, Indonesia. *Land* 9, 95.
- Tagliarino, N.K., Bununu, Y.A., Micheal, M.O., De Maria, M., Olusanmi, A., 2018. Compensation for expropriated community farmland in Nigeria: an in-depth analysis of the laws and practices related to land expropriation for the Lekki Free Trade Zone in Lagos. *Land* 7, 23.
- Toumbourou, T.D., Dressler, W.H., 2021. Sustaining livelihoods in a palm oil enclave: Differentiated gendered responses in East Kalimantan, Indonesia. *Asia Pac. Viewp.* 62, 40–55.
- Trembecka, A., Kwiatnik-Pruc, A., 2018. An analysis of the changes in the structure of allotment gardens in Poland and of the process of regulating legal status. *Sustainability* 10, 3829.
- Urano, M., 2014. Impacts of newly liberalised policies on customary land rights of forest-dwelling populations: a case study from East Kalimantan, Indonesia. *Asia Pac. Viewp.* 55, 6–23.
- Uzun, B., Celik Simsek, N., 2018. Land readjustment for minimizing public expenditures on school lands: a case study of Turkey. *Arab J. Geosci.* 11, 228.
- van Dijk, T., Kopeva, D., 2006. Land banking and Central Europe: future relevance, current initiatives, Western European past experience. *Land Use Policy* 23, 286–301.
- van Schendel, W., 2002. Stateless in South Asia: the making of the India-Bangladesh enclaves. *J. Asian Stud.* 61, 115–147.
- Vetrita, Y., Cochrane, M.A., 2020. Fire frequency and related land-use and land-cover changes in Indonesia's peatlands. *Remote Sens* 12, 5.
- Wajdi, N., Mulder, C.H., Adioetomo, S.M., 2017. Inter-regional migration in Indonesia: a micro approach. *J. Popul. Res* 34, 253–277.
- Wallis, J.J., 2000. American Government Finance in the Long Run: 1790 to 1990. *J. Econ. Perspect.* 14, 61–82.

- White, B., Borras Jr., S.M., Hall, R., Scoones, I., Wolford, W., 2012. The new enclosures: critical perspectives on corporate land deals. *J. Peasant Stud.* 39, 619–647.
- Whitaker, S., Fitzpatrick IV, T.J., 2016. Lank bank 2.0: An empirical evaluation. *J. Region. Sci* 56, 156–175.
- Widoyoko, D., 2007. Good governance and provision of affordable housing in DKI Jakarta: Case study. The Water, Engineering Development Centre, (WEDC), Loughborough University, Leicestershire, UK.
- Wissink, B., Koh, S.Y., Forrest, R., 2017. Tycoon City: Political Economy, Real Estate and the Super-Rich in Hong Kong. In: Forrest, R., Koh, S., Wissink, B. (Eds.), *Cities and the Super-Rich. The Contemporary City*. Palgrave Macmillan, New York.
- Wittayapak, C., Baird, I.G., 2018. Communal land titling dilemmas in northern Thailand: From community forestry to beneficial yet risky and uncertain options. *Land Use Policy* 71, 320–328.
- Yu, Z., Wang, F., 2017. Income inequality and happiness: an inverted U-shaped curve. *Front Psychol.* 8, 2052.
- Zhou, J., Ronald, R., 2017. The resurgence of public housing provision in China: the Chongqing programme. *Hous. Stud.* 32, 428–448.
- Zhuang, X., Zhao, S., 2014. Effects of land and building usage on population, land price and passengers in station areas: A case study in Fukuoka, Japan. *Front. Archit. Res.* 3, 199–212.