

AMERICAN
SCIENTIFIC
PUBLISHERS

Copyright © XXXX American Scientific Publishers
Letters
All rights reserved
Printed in the United States of America

Advanced Science

Vol. XXXXXXXXX

Three Dimensional Land Legislation in Malaysia

Tan Liat Choon^{*1}, Muhamad Uznir Bin Ujang¹, Thoo Ai Chin², Yap Beng Chuan³

¹Universiti Teknologi Malaysia, Faculty of Geoinformation & Real Estate, Malaysia

²Universiti Teknologi Malaysia, Faculty of Management, Malaysia

³Landsoft Sdn Bhd, Malaysia

Strata Titles Act 1985 (Act 318), National Land Code 1956 (Act 56) with these amendments and Strata Management Act 2013 (Act 757) have been established with the increasing of multi-storey property development. Combined effect of these laws are to ensure strata titles being passed to buyers upon delivery of vacant possession. However, such amendments in three acts have not cater for three dimensional properties. Therefore, this paper recommended some solutions to formulate and improve the existing land related legal documents towards three dimensional land legislation.

Keywords: Three Dimensional, Cadastre, Legislation, Multi-layer Property.

1. INTRODUCTION

Currently, there is shortage of suitable legislation about three dimensional properties in land and cadaster legislation. Previous researches¹⁻¹¹ have been discussed on this matter but still no solid evident in law to dispose private rights in land in three dimensional environment¹²⁻²³.

Three main legal documents involve in three dimensional (3D) property *viz.* the National Land Code 1965 (Act 56), Strata Titles Act 1985 (Act 318) with the amendments and Strata Management Act 2013 (Act 757), besides title document and certified plan that interrelated to Malaysia 3D property²⁴⁻²⁸.

There are 6 types title documents depend on location and size. The Malaysia cadastral map is certified plan. These certified plans are for land, strata and stratum (underground). Lately, the execution of eCadastre Malaysia makes certified plan format become simpler, but it still preserve the information on the plan.

Meanwhile, certified strata plan contains parcels and land parcels information such as number of floors/levels, boundary dimensions, heights of the building, floor areas, parcel numbers etc. Until now, still no certified stratum plan issued because of shortage of stratum object registration and

survey awareness.

*Email Address: tanliatchoon@gmail.com

2. METHODS TO ACHIEVE THREE DIMENSIONAL'S LAND LEGISLATION

To make three dimensional land legislation possible, we review many issues such as cost of transition, the necessity to change, handling of the cadaster procedures, how to define boundaries? How to manage those three dimensional properties? The rights of property, technical and organizational. These reviews have been discussed in national and international platforms²⁹⁻³⁶.

3. FINDING OF RECOMMENDATIONS FOR IMPROVEMENT IN LEGAL DOCUMENT

As mentioned earlier, the need of formulate three dimensional land legislation is crucial in Malaysia. Therefore, we should look at the relevant of three dimensional property legal aspects and amendments and should be made to the existing land laws. This is why the ownership of 3D properties have been exact crucial regarding to property rights. Many preliminary researches have been discussed for improvement of the institutional aspects.³⁷⁻⁴³

The National Land Code 1965 (NLC 1965) specified that land can be classified as seabed, foreshore and land above shoreline. New laws should be established because of the real need to create 3D property in certain cases. Hence, new interpretation of 3D property should be given as *“three dimensional property means a property unit or space which in its entirety is delimited both horizontally and vertically”*. New classification of land should be suggested as *“for the purpose of this Code, land shall also be classified as three dimensional property unit and space”*.

Section 75A of NLC 1965 allows the use of air space above reserved and State land. State government can give permit for period not more than 21 years for doing activities. Air space comprises 3D property unit and space dimension above surface. Thus a new paragraph should be amended by adding *“from the aforesaid it follows that a structure, as a rule, also includes three dimensional property unit and space”* in related section.

Section 92 of NLC 1965 stated the rights to use by owner after State dispose the land under final title and the owner can subdivide or partition or amalgamation the land or building and can transfers, leases, charges and surrenders the land or building. As stated above, we propose to add a new statement as *“the rights exercisable by any person or body to whom State land has been alienated under final title shall also include the rights for three dimensional property unit and space”*.

The Section 92A of NLC 1965 reads stratum land as land that below the earth surfaces. Stratum land comprises dimension below surface for 3D property unit and space. So, the interpretation should be corrected and reads as *“underground land means land which lies below the surfaces of the earth and that shall also include three dimensional property unit and space”*.

Strata Titles Act 1985 (STA 1985) and Strata Management Act 2013 (SMA 2013) stated that any two or more storeys building on alienated land may be subdivided into parcels. Furthermore, land also can be subdivided into land parcels. New laws should be added for allowing the creation of 3D property and read as *“three dimensional property unit and space mean a property unit which in its entirety is delimited both horizontally and vertically”*. Also, to add new statement and reads as *“from the aforesaid it follows that a building or land, as a rule, also includes three-dimensional property unit and space”*. In addition, new interpretation of three dimensional property should be given as *“parcel volume in relation to a parcel means the volume occupied by that parcel”*, *“land parcel volume in relation to a parcel means the volume occupied by that land parcel”*, *“accessory parcel volume in relation to a parcel means the volume occupied by that accessory parcel”*.

STA 1985 and SMA 2013 specified the power and duty of Management Corporation and subdivided building or land. New laws should be added to allow the formation of 3D property. Consequently, a new wording to be added as *“from the aforesaid it follows that the duties and powers, as a rule, also include in three dimensional property unit and space”*.

4 FINDING OF RECOMMENDATIONS FOR IMPROVEMENT IN PLAN

Minor changes are propose to certified land parcel plan, 3D property lot can be indicated with backslash to the lot numbers ($\setminus 17018 \setminus$). The 3D property boundaries are identified by the specific line type of points on a dotted dash lines whereas the 3D property spaces are demarcated and hatched by a surface polygons.

At the same time, minor changes are propose on certified strata plan, such as to the parcels ($\setminus I \setminus$) or land parcels ($\setminus LI \setminus$) or accessory parcels ($\setminus AI \setminus$) or mezzanine floors ($\setminus NI \setminus$) number. The 3D property boundaries are specified by the specific line type of points on a dotted dash lines while the 3D property spaces are hatched and demarcated by a surface polygons. Furthermore, it is recommended that related building plan in digital format to be attached to related government agencies upon submission.

Express conditions also recommended for minor changes. Title documents that involve are Form 4A(K), 4(K), 11AK, 11BK, 5EK, 5DK, 5CK and 5BK. It can be designed as *“the land comprised in this title is a three dimensional property unit that in it is entirely is delimited both horizontally and vertically”* or *“the land comprised in this title is a three dimensional property space included in a property unit and delimited both horizontal and vertically”*.

Besides above-mentioned, final title, qualified title land plan (Form B1, Form B2), strata title plan (Form S(K)) respectively would follow the propose format 3D certified plan. A 3D property land plan is showed with

backslash to the lot numbers (\ 106 \). In the meantime, proposed backslash to the parcels (\ I \) or land parcels (\ LI \) or accessory parcels (\ AI \) or mezzanine floors (\ NI \) number. The 3D property boundaries are itemized by the specific line type of points on a dotted dash lines. Meanwhile, 3D property spaces are demarcated and hatched by a surface polygons.

5. CONCLUSIONS

The purpose of this paper is to recommend some generalize concepts of 3D property rights and to propose the potentials of implementing these formation into current land laws and related documents. Hence, many organizational, technical and legal matters should be examined. In conclusion, so as to establish 3D system based information database, such land related laws and regulations need to be amended accordingly.

ACKNOWLEDGMENTS

This work was funded by Ministry of Higher Education Malaysia (MOHE) and Universiti Teknologi Malaysia GUP Tier 1 (PY/2016/06368 – Vot Number 15H61).

REFERENCES

- [1] Tan, Liat Choon, Khadijah Hussin and Ernest Khoo, H.O. Towards 3D Property Legislation in Malaysia. In: Proceeding of FKSG Postgraduate Seminar 2009. 14-15 July 2009. Universiti Teknologi Malaysia, Skudai, Johor, Malaysia (2009).
- [2] Tan, Liat Choon, Khadijah Hussin and Ernest Khoo, H.O. Making 3D Property Legislation Feasible in Malaysia. In: Proceedings of 8th International Symposium and Exhibition on Geoinformation 2009 (ISG 2009). 10-11 August 2009. Kuala Lumpur, Malaysia (2009).
- [3] Tan, Liat Choon, Khadijah Hussin and Ernest Khoo, H.O. Malaysian 3D Property Legislation: A Preliminary Approach. In: Proceedings of ISPRS International Workshop on Multidimensional & Mobile Data Model (ISPRS WG II-5). 21-22 October 2009. Universiti Teknologi Malaysia, Skudai, Johor, Malaysia (2009).
- [4] Tan, Liat Choon, Khadijah Hussin and Ernest Khoo, H.O. Making 3D Property Legislation Feasible in Malaysia. In: Proceedings of TS 2A-Legal Aspects in Land Administration, 7th FIG Regional Conference, Spatial Data Serving People: Land Governance and Environment-Building the Capacity. 19-22 October 2009. Hanoi, Vietnam (2009).
- [5] Tan, Liat Choon, Khadijah Hussin and Ernest Khoo, H.O. Making 3D Property Legislation Feasible in Malaysia. In: Proceeding of 3rd International Conference on Built Environment in Developing Countries-Sustainable Built Environment: Tomorrow Agenda Today (ICBEDC 2009). 2-3 December 2009. Universiti Sains Malaysia, Pulau Pinang, Malaysia (2009).
- [6] Tan, Liat Choon, Khadijah Hussin and Ernest Khoo, H.O. Malaysian 3D Property Legislation-A Preliminary Approach. In Fuziah Hj Abu Hanifah, Shaharudin Idrus, Azhari Mohamed et al. (Eds). Buletin Geospasial Sektor Awam. Edisi 2/2009. (pp. 17-28). Putrajaya, Malaysia: Pusat Infrastruktur Data Geospasial Negara (MaCGDI) (2009).
- [7] Tan, Liat Choon, Khadijah Hussin and Ernest Khoo, H.O. 3D Property Situation in Malaysia-Initiatives towards 3D Cadastre. In: Proceedings of TS 5A-Development of 3D Cadastral, XXIV FIG International Congress 2010, Facing the Challenges-Building the Capacity. 11-16 April 2010. Sydney, Australia (2010).
- [8] Tan, Liat Choon, Khadijah Hussin and Ernest Khoo, H.O. New Cadastral System Towards Planning and Construction Sustainability. In: Proceedings of 1st International Conference on Sustainable Building and Infrastructure (ICSBI 2010). 15-17 June 2010. Kuala Lumpur, Malaysia (2010).
- [9] Tan, Liat Choon and Khadijah Hussin. New Cadastral System Towards Sustainable Development. In: Proceedings of International Symposium and Exhibition on Geoinformation 2010 and Map Asia 2010. 26-28 July 2010. Kuala Lumpur, Malaysia (2010).
- [10] Tan, Liat Choon and Khadijah Hussin. New Cadastral Approach for Sustainable Development in Multilayer Building. In: Proceeding of 4th International Conference on Built Environment in Developing Countries-Sustainable Built Environment: Tomorrow Agenda Today (ICBEDC 2010). 1-2 December 2010. Universiti Sains Malaysia, Pulau Pinang, Malaysia (2010).
- [11] Tan, Liat Choon and Khadijah Hussin. Developing A New Cadastral Registration Approach. In Fuziah Hj Abu Hanifah, Shaharudin Idrus, Azhari Mohamed et al. (Eds). Buletin Geospasial Sektor Awam. Edisi 2/2010. (pp. 4-11). Putrajaya, Malaysia: Pusat Infrastruktur Data Geospasial Negara (MaCGDI) (2010).
- [12] Tan, Liat Choon, Khadijah Hussin and Ernest Khoo, H.O. New Cadastral System Approach for Planning Sustainability in Malaysia. International Surveying Research Journal. 1(1) (2011) 5-24.
- [13] Tan, Liat Choon, Khadijah Hussin and Ernest Khoo, H.O. Malaysian 3D Property Legislation-A Preliminary Approach. International Surveying Research Journal. 1(1) (2011) 25-43.
- [14] Tan, Liat Choon and Khadijah Bt Hussin. Overview of the 3D Property Development. In Ng Eng Guan, Mazlan Hj Ashaari, Azlim Khan Abd Raof Khan et al. (Eds). Buletin GIS 2/2011. (pp. 46-70). Kuala Lumpur, Malaysia: Jabatan Ukur dan Pemetaan Malaysia (JUPEM) (2011).
- [15] Tan, Liat Choon and Khadijah Hussin. Property Formation-Changed in Land Related Legal Document. International Journal of Geomatics and Geosciences. 2(2) (2011) 555-567.
- [16] Tan, Liat Choon and Khadijah Hussin. Issues on 3D Property. International Journal of Scientific and Engineering Research. 3(2) (2012) 17-22.
- [17] Tan, Liat Choon and Khadijah Hussin. A Survey Related to 3D Property. International Journal of Humanities and Social Science. 2(4) (2012) 69-75.
- [18] Tan, Liat Choon and Khadijah Hussin. Towards E-Government's 3D Property. International Journal of Scientific and Engineering Research. 3(3) (2012) 106-115.
- [19] Tan, Liat Choon and Khadijah Hussin. Towards 3D Property Formation. International Journal of Scientific and Engineering Research. 3(3) (2012) 436-443.
- [20] Tan, Liat Choon and Khadijah Hussin. Establishing 3D Property Rights in Malaysia. In: Proceedings of TS 5B-FIG Working Week. 6-10 May 2012. Rome, Italy (2012).
- [21] Tan, Liat Choon and Khadijah Hussin. Overview of Swedish Cadastre System. In Ng Eng Guan, Mazlan Hj Ashaari, Azlim Khan Abd Raof Khan et al. (Eds). Buletin GIS 1/2012. (pp. 22-36). Kuala Lumpur, Malaysia: Jabatan Ukur dan Pemetaan Malaysia (JUPEM) (2012).
- [22] Tan, Liat Choon and Khadijah Hussin. A Survey Related to 3D Property in Malaysia. In Fuziah Hj Abu Hanifah, Shaharudin Idrus, Ng Eng Guan et al. (Eds). Buletin Geospasial Sektor Awam. Edisi 1/2012. (pp. 20-29). Putrajaya, Malaysia: Pusat Infrastruktur Data Geospasial Negara (MaCGDI) (2012).
- [23] Tan, Liat Choon. 3D Property-Types of Rights. In: Proceedings of 11th International Symposium and Exhibition on Geoinformation 2012 (ISG 2012). 25-26 September 2012. Kuala Lumpur, Malaysia (2012).
- [24] Tan, Liat Choon and Looi Kam Seng. Developing Infrastructure

- Framework for 3D Cadastre. In: Proceedings of the International Symposium and Exhibition on Geoinformation 2013 (ISG 2013). 24-25 September 2013. Kuala Lumpur, Malaysia (2013).
- [25] Tan, Liat Choon and Looi Kam Seng. Towards Malaysian Multipurpose 3D Cadastre based on the Land Administration Domain Model (LADM)-An Empirical Study. In: Proceedings of the 5th Land Administration Domain Model Workshop (LADM 2013). 24-25 September 2013. Kuala Lumpur, Malaysia (2013).
- [26] Tan, Liat Choon and Looi Kam Seng. Developing Infrastructure Framework to Facilitate the Malaysian Multipurpose 3D Cadastre. In: Proceedings of the XXV FIG International Congress 2014 (XXV FIG 2014). 16-21 June 2014. Kuala Lumpur, Malaysia (2014).
- [27] Nur Amalina Zulkifli, Alias Abdul Rahman, Peter van Oosterom, Hasan Jamil, Chee Hua Teng, Tan, Liat Choon, Looi kam Seng and Chan Keat Lim. Towards Malaysian LADM Country Profile for 2D and 3D Cadastral Registration System. In: Proceedings of the XXV FIG International Congress 2014 (XXV FIG 2014). 16-21 June 2014. Kuala Lumpur, Malaysia (2014).
- [28] Nur Amalina Zulkifli, Alias Abdul Rahman, Peter van Oosterom, Hasan Jamil, Chee Hua Teng, Tan Liat Choon, Looi Kam Seng and Chan Keat Lim. Development of a prototype for the assessment of the Malaysian LADM Country Profile. In: Proceedings of the XXV FIG International Congress 2014 (XXV FIG 2014). 16-21 June 2014. Kuala Lumpur, Malaysia (2014).
- [29] Alias Abdul Rahman, Imzam Hassan, Amalina Zulkifli and Liat Choon Tan. Conceptual Modelling of 3D Cadastre and LADM. In: Proceedings of The World Cadastre Summit Congress and Exhibition 2015. 20-24 April 2015. Istanbul, Turkey (2015).
- [30] Babalola Sunday Oyetayo, Abdul Rahman Alias and Choon Tan Liat. A Brief Review of Land Administration Domain Model and its Temporal Dimension. In: Proceedings of the World Virtual Conference On Applied Science And Engineering Application 2015. 27-29 March 2015. Johor Bahru, Malaysia (2015).
- [31] Babalola Sunday Oyetayo, Choon Tan Liat, Abdul Rahman Alias, Ayeni Winston and Ajayi Gabriel. An Analysis of 3D Situation as a Prospect for (LADM) in Nigeria: A Malaysian Initiative. In: Proceedings of the 1st International Conference on Science, Engineering, and the Social Science (ICSESS 2015). 11-13 May 2015. Johor Bahru, Malaysia (2015).
- [32] Babalola Sunday Oyetayo, Abdul Rahman Alias and Choon Tan Liat. A Brief Review of Land Administration Domain Model and its Temporal Dimension. *Journal of Advanced Review on Scientific Research*. 6(1) (2015) 1-15.
- [33] Tan Liat Choon, Nur Amalina Zulkifli, Muhamad Uznir Ujang and Thoo Ai Chin. Malaysian Land Administration Domain Model Country Profile. *Asian Social Science*. 11(24) (2015) 301-314.
- [34] Babalola Sunday Oyetayo, Abdul Rahman Alias, Choon Tan Liat, Peter Van Oosterom. Possibilities of Land Administration Domain Model (LADM) Implementation in Nigeria. In: Proceedings of the Joint International Geoinformation & National Utility Mapping Conference (JIGC 2015). 28-30 October 2015. Kuala Lumpur, Malaysia (2015).
- [35] Babalola Sunday Oyetayo, Choon Tan Liat, Abdul Rahman Alias, Ayeni Winston and Ajayi Gabriel. An Analysis of 3D Situation as a Prospect for (LADM) in Nigeria: A Malaysian Initiative. *Journal Teknologi*. 77(14) (2015) 7-13.
- [36] Nur Amalina Zulkifli, Alias Abdul Rahman, Peter van Oosterom, Liat Choon Tan, Hasan Jamil, Chee Hua Teng, Kam Seng Looi and Keat Lim Chan. The Importance of Malaysian Land Administration Domain Model Country Profile in Land Policy. *Land Use Policy*. Volume 49 (2015) 649-659.
- [37] Tan Liat Choon, Muhamad Uznir Ujang, Thoo Ai Chin, Mohd Hanif Abu Hasan and Shaidatul Nur Wahidah Muhammad Shah. New Strata Rights in Malaysia. In: Proceedings of the 2nd Sustainability Initiatives: Case Studies in Malaysia, Philippines and Indonesia and International Conference on Urban Studies (2nd SIMPI 2016). 4-5 May 2016. Manila, Philippines (2016).
- [38] Tan Liat Choon, Muhamad Uznir Ujang, Thoo Ai Chin, Ng See Eng, Goh Leong Sen, Mohd Hanif Abu Hasan and Shaidatul Nur Wahidah Muhammad Shah. Condominium Rights in Malaysia. In: Proceedings of the Recent Research in Social Sciences (SOCSIC 2016). 31 May – 2 June 2016. Bandung, Indonesia (2016).
- [39] Babalola Sunday Oyetayo, Choon Tan Liat, Abdul Rahman Alias and Isong Mfon. Network Processes and Web Design for Land Registration in Land Administration System of Nigeria. In: Proceedings of the 2nd International Conference on Science, Engineering, and the Social Science (ICSESS 2016). 29 May – 1 June 2016. Johor Bahru, Malaysia (2016).
- [40] Sunday Oyetayo Babalola, Adedayo Kazeem Odunnaiya and Liat Tan Choon. Geoinformatics in the Generation and Management of Domestic Waste in Aule Gra, Akure Nigeria. In: Proceedings of the International Conference on Science, Engineering, Management and Social Sciences (ICSEMSS 2016). 6 – 8 October 2016. Johor Bahru, Malaysia (2016).
- [41] S. O. Babalola, L. T. Choon, A. Abdul Rahman, H. Tata and A. A. Tukka. Web Design and Development for Land Registration: An Online Cadastral Delivery Service in Nigeria. *Indian Journal of Science and Technology*. 77(14) (2016) 7-13.
- [42] Tan Liat Choon, Muhamad Uznir Ujang, Thoo Ai Chin, Ng See Eng, Goh Leong Sen, Mohd Hanif Abu Hasan and Shaidatul Nur Wahidah Muhammad Shah. Condominium Rights in Malaysia. *Advanced Science Letters*. 22(12) (2016) 4194-4196.
- [43] Babalola Sunday Oyetayo, Abdul Rahman Alias, Choon Tan Liat, Abidoye Ayodeji Iynu, and Abiri Anthony Olatunbosun. Internet Application for Online Cadastral Services : A Case Study in Nigeria. *Journal of Advanced Research Design*. 36(1) (2017) 1-12.