



**NATIONAL SYMPOSIUM  
ON  
REAL ESTATE MANAGEMENT AND VALUATION**

**2015**

**Department of Estate Management and Valuation  
Faculty of Management Studies and Commerce  
University of Sri Jayewardenepura**



**“Contribution of Real Estate on Socio Economic  
Development in the Country”**

**Symposium Proceedings**

**First National Symposium  
on  
Real Estate Management and Valuation  
5<sup>th</sup> November 2015**

Department of Estate Management and Valuation  
Faculty of Management Studies and Commerce  
University of Sri Jayewardenepura  
Sri Lanka

**Disclaimer**

The responsibility for the opinions expressed, in articles, studies and other contributions in this publication rests solely with their authors, and this publication does not constitute in an endorsement by the DEMV of the opinions expressed in them.

**ISSN** 2465-6305

**Chief Editor** Mrs N.C. Wickramaarachchi

**Panel of Reviewers** Prof. R.G. Ariyawansa  
Prof. (Mrs) Padma Weerakoon  
Mrs. Janakie Edirisinghe  
Mrs. N.C Wickramaarachchi

**Cover Design** Mr. Terans Gunawardhana

**Publisher** Department of Estate Management and Valuation  
2015©

## Message from the Vice Chancellor



It is with great pride and pleasure I write my congratulatory message for the First National Symposium on Real Estate Management and Valuation, 2015 organized by the Department of Estate Management and Valuation (DEMV), Faculty of Management Studies and Commerce, University of Sri Jayewardenepura on the theme of Contribution of Real Estate to Socio Economic Development of the country.

On this significant day, I am delighted to join the pride of the DEMV on two grounds. First, as the former Dean of the faculty. Secondly, as the Vice Chancellor of the University of Sri Jayewardenepura. It is with great pleasure I appreciate the progress of DEMV in taking steps to open a forum towards the development of the research culture, on a topical theme as an annual event.

This is indeed a great opportunity for the authors and the presenters to share their innovative research findings with other intellectuals. I am happy to note that DEMV has not only contributing to produce graduates to satisfy the needs of the society, but also provided a suitable setting that assists to strengthen the academic-industry relationship. The symposium is an excellent example of university and industry cooperation.

I would like to extend my gratitude to the DEMV for organizing a timely event and would like to send my wishes to all participants for a fruitful day.

Professor Sampath Amaratunge  
Vice Chancellor  
University of Sri Jayewardenepura

## Message from the Dean, Faculty of Management Studies and Commerce



It is with great pleasure I send this message for the First National Symposium on 'Real Estate Management and Valuation- 2015' organized by the Department of Estate Management and Valuation (DEMV), Faculty of Management Studies and Commerce, University of Sri Jayewardenepura.

I would like to note here that, this special event initiated by the Department of Estate Management and Valuation (DEMV) is of great significance as it immensely contributes to the Department to earn its due recognition, for which it is entitled to, as it is a unique department in the Faculty which is engaged in disseminating limited and rare academic disciplines under Estate Management and Valuation. At the same time, this symposium creates opportunities for the academics and the industry to share knowledge and experiences under this valuable theme and, for the Faculty to produce versatile graduates parallel to its mission; enriched with specialized subject knowledge and required professional skills.

Moreover, it is not an exaggeration to say that, the DEMV is the pioneering department in the Faculty of Management Studies and Commerce which contributes to the disciplines of the Real Estate Management and Valuation by providing high quality undergraduate and postgraduate educational opportunities.

While appreciating the efforts made by the department to make this event a success, I wish that, this symposium will bring benefits to all the participants.

Dr. U. Anura Kumara  
Dean  
Faculty of Management Studies and Commerce  
University of Sri Jayewardenepura

## Message from the Head of the Department



I have great pleasure in releasing this message for the publication of proceedings of the first National Symposium organized by the Department of Estate Management and Valuation (DEM V) under the theme of “Contribution of Real Estate on Socio-Economic Development of the Country”.

In fact, the Real Estate is not an option but a fundamental ingredient for the development. Yet, as it is highly expensive and a complex phenomenon, for managing and ensuring higher value of real estate, scientific knowledge is essential. Hence, this symposium plays a vital role in generating and disseminating knowledge in the area of real estate management and valuation. Further, this symposium expects to build active relationships/networks for seeking new knowledge among stakeholders mainly academia, state agencies, professionals and business organizations. So, DEM V will grow this and continue as an annual event in line with the national development needs.

I take this opportunity to thank for the effort taken by Mrs N C Wickramaarachchi, Senior Lecturer of the Department in organizing this in highly professional manner. Also the Key Note Speaker, Professor Ch.QS.Prof.(Mrs)Chitra Weddikkra and all the other contributors by providing papers and conducting presentations are highly appreciated.

Prof. R G Ariyawansa  
Head Department of Estate Management and Valuation  
University of Sri Jayewardenepura

## Message from the Conference Chair



I take immense pride in keeping few thoughts on this momentous occasion of the First National Symposium on Real Estate Management and Valuation, 2015 organized by the Department of Estate Management and Valuation (DEMVA) of University of Sri Jayewardenepura.

B.Sc Estate Management and Valuation (Special) Degree Program is the first land base higher education program in Sri Lanka and has a proud history since 1973. The program contributes to both Real Estate Valuation and the Spatial Planning professions in Sri Lanka.

The First National Symposium on Real Estate Management and Valuation held on 5<sup>th</sup> of November, 2015 is a long felt requirement that comes true. The conference aims at providing a knowledge sharing session, in between the industry and the academia. The proceedings included invited papers from the industrial representatives, the academic staff and few concept papers from the undergraduates of the DEMVA.

It is my pleasure to thank all those who add the glamour to the symposium by providing their scholarly work. I would like to thank Professor R.G.Ariyawansa, the Head of the DEMVA for appointing me as the conference chair. The conference would not have been a reality, without the fullest support and the committed contribution given by the conference committee, the entire DEMVA academic staff. I offer my gratitude to them. My thanks also go to the non-academic staff and the students association of DEMVA for their unconditional involvement towards the success of the symposium.

I wish you all a productive and stimulating academic session.

**Mrs. N.C.Wickramaarachchi**

Senior Lecturer

Department of Estate Management and Valuation  
University of Sri Jayewardenepura

*“Real estate is the central building block of the foundation of social well-being. Thus, planning and laying foundations of real estate are not for erecting physical structures, but for the bases and nodal points or live connectors of social & market networks.”*

*“Real Estate is not an option but a fundamental ingredient for the socio-economic development. Hence, managing for higher value of real estate ensuring its highest and best use is a key factor for the achievement of the development targets.”*

**-Professor .R.G.Ariyawansa**



## Table of Contents

No.	Title	Page No
1	<b>Land title Registration in Sri Lanka, Related Issues and Solutions</b> P.M.P Udayakantha	01-23
2	<b>A Grey Area in Practice of Real Estate Valuation: Case of the Rent Act</b> P.W.Senaratne	
3	<b>An Analysis on Residential Land Price Determination</b> H M Premathilake	
4	<b>The Regulatory Implication on Property Values</b> G W G Abeygunawardene	
5	<b>A Study on Compensation under Compulsory Purchase and suggest more Reasonable Method in terms of Law of Equity</b> J N Hettiarachchi	
6	<b>Guidance on Public Sector Accounting Standard and Valuation Standards for State Assets Valuation</b> A.V.U Wsantha	
7	<b>Municipal Solid Waste Management (MSWM) in Sri Lanka</b> H M L P Karunarathne	
8	<b>Thamara Adikaram</b>	
9	<b>Public Sector Property Audit (PSPA) and Business Plan for Property Marketing and Development</b> A.Wedamulla	
10	<b>Application of Empirical Rule on Standard Deviation and the Chebyshev's Theorem: Quantitative Aspects of Real Estate Market Studies</b>	

---

W.H.T. Gunawardhana

---

**11 Land information Systems for Land Administration, Land-Use Planning and Resources Management; Reference to Mahawali Development Project**  
H. H. Leelananda

---

**12 Urban Change and Real Estate Market**  
Athula Wijethunga

---

**13 Factors considered by Customers in Purchasing Houses from Private Residential Development Projects**  
W.T.L. Fernando, P.C.Kaluthanthri

---

**14 Office Market: An Overview of Colombo CBD Office Market and a Literature Review of Rent Determine Factors**  
M.M.T.S.Silva

---

**15 Human Settlement Strategy of Mahaweli Development Project**  
U.G.P.C Abeywickrama

---

**16 An Analysis of the Satisfaction Level of Resettled People: A Case at Mihindu Senpura Housing Program**  
K.V.P.P.Kulasinghe

---

## **Land title Registration in Sri Lanka, Related Issues and Solutions**

**P.M.P Udayakantha<sup>1</sup>**

<sup>1</sup>Surveyor General

Survey Department of Sri Lanka

[sg@survey.gov.lk](mailto:sg@survey.gov.lk)

### **Introduction**

Land is the most fundamental asset of a country and Sri Lanka is not an exception. It is a very important economic asset that also carries serious social, religious, political and hereditary values. It makes land more than a simple commodity to a country or a nation. Although the land is a fundamental tool of development, unfortunately, the administration of land has been saddled with so many problems, that country as a whole, has been unable to benefit fully from the land. It turns out to be the source of many human conflicts that ultimately impedes the progress of many developing countries, as same as Sri Lanka. This is because majority of land holding is informal and ownership rights to these lands are not adequately documented, that creates a lot problems. It is generally agreed that the ills associated with traditional land tenure can be traced to, or stem from the uncertainty of land title ownership and the litigation that follows in its train. Because of inadequate documentation of ownership rights in landed property, the enormous assets cannot be turned into capital, which create the “wealth of nations”.

Total extent of land in our country covers an area of 6.5 million hectares. Compared to total population of approximately 21 million in the country it is only a limited extent. Further, the area available for use is nearly 84% of the total extent and it is roughly equivalent to 5.5 million hectares. The balance approximately 1.0 million hectares in extent comprises of road reservation, water ways, reservoirs and their reserves, marshy lands, mangroves and steep lands etc.

The per-capita extent of land in Sri Lanka is concerned as it is in the process of sharp decline. At the beginning of the twentieth century per-capita extent of land was 1.53 hectares. By now it has dropped to 0.26 hectares. With the sharp increase of population per-capita extent will further decline in the future. Presuming that the anticipated population by the year 2030 will be 25 million, such position compared with the total extent of land available it has been estimated that the per-capita extent of land will future decline to 0.22 hectares. Furthermore, the existing demand for land in our country has

exceeded far beyond the supply. Although the maximum extent of land an individual is permitted to possess has been restricted by the Land Reform Law, so far as land tenure in this country is concerned, sharp inequity and unfairness prevail in the distribution of ownership of land.

In this circumstances land use and management should be promoted so that the productivity of a higher level could be maintained in the land sector with minimum degradation of the land resource. Likewise, it is essential to implement a sustainable national land policy whereby the land resource could be utilized in a productive manner based on the principal that the entire community will hold ownership to land in an equitable manner.

Uncertainties of land ownership and identification of lands have been longstanding issues hindered effective utilization of lands for development, agricultural, residential and use as a tool for generating capital. If these issues are solved, it will make a huge impact on every such activity and will be a great boost to national economy.

### **Land Registration in Sri Lanka**

In ancient times, land alienations by kings have been published by rock inscriptions. It included the basics of land like identification of land, to whom it has been granted, purpose of grant and related conditions or restrictions. In Dutch era, the document called a *thombu* is used as a register of lands.

With the proclamation made in 1800 by Governor Fredrick North, state lands were granted or sold under a Title plan. Therefore, a systematic procedure for land registration was in place in 1800. However, this process did not continue, and in 1863, with the introduction of Registration of Documents Ordinance, situation changed. Transitions Lands were registered instead of registration of Land or the Title. It was well known that this system had inherent weaknesses but as there was no alternative at the time registration of documents continued. In the meantime, several attempts were made but no success was achieved due to complexity in land ownership and problems in surveying all land parcels. Several attempts have been made to introduce land titling but were not successful.

### **History of Title Registration in Sri Lanka**

While the Title Registration was in place, in 1863 when “an Ordinance for the Registration of Title to land and all deeds affecting land” was enacted. That provided firstly for Registration of title to land, and secondly for Registration of all Deeds affecting land. We are told that the Primary object

was Registration of Title and Registration of Deeds was an interim measure until title registration was completed. Although the law was enacted, the provisions for Title Registration were never implemented, and in 1877 they were deleted.

There were several subsequent efforts for Registration of Title all of which failed except that certain provisions of an Ordinance passed in 1877 relating to Registration of Title were brought into operation, on an experimental basis, in 1907 three villages in the southern suburbs of Colombo (Kirillapona, Wellawatte and Dehiwala area). After two or three years it was found to be too laborious and expensive and therefore given up. The Registration of Title Act no. 21 of 1998 is the latest attempt at Title Registration more than 100 years after the last experimental effort of 1877. The new Act has been brought into operation in a few areas. In those areas the officers who had to implement the provisions of this Act have come up against many difficulties and have suggested extensive amendments to the present Act.

Reasons for failure were identified as difficulties to identify the ownership due to complexities and delays in surveys owing to shortage of surveyors.

### **Recommendations made by Land Commissions – 1927, 1955 and 1983**

There have been three Land Commissions appointed and operated in Sri Lanka. In all three of their reports, it was strongly recommended that a systematic registration of Title should take place in order to establish a strong registration system to strengthen the land ownership and rights, ensure reliability of transitions and utility of land and to provide an opportunity for scientific land management.

### **Registration of documents in contrast to title**

The present system of land registration in Sri Lanka, which is based on the “registration of deeds”, was introduced to Sri Lanka in 1864. In this system it is the deed which is registered. A deed is a record of a particular transaction and serves as evidence of this specific agreement. Therefore, “registration of deeds” is a system for registering legal documents. It is not a system of registering title to land. Usually, in a deed registration system, recording does not automatically guarantee the concerned rights. A deed itself does not prove who owns the land; it only records an isolated transaction.

The accuracy of the contents of the document registered is not investigated by the registering authority and therefore, no guarantee is given to the contents of the deed such as the ownership of land, or the boundaries or the

extent of the land by the Registrar. In extreme situations, there can be two or more deeds registered for one particular land and also there can be a deed registered for a land that is not in existence. Almost anything in between these extreme situations is possible.

### **Disadvantages and Shortcomings of Documents (Deeds) Registration**

Registration of a document prepared of land transaction (Deed) does not establish the absolute ownership or the title to the land.

There is no transparency in implementing deed registration system.

Location of the Land indicated in the deed could not physically be identified on the ground. Most of deeds do not have plans attached to them.

In this process, it is the document which is legally registered, but not the “title”.

A present deed may not necessarily contain the details of the previous deed. Establishing the ownership of land and obtaining a conclusive report is a long expensive and complex process. (for instance)

- The deed does not declare a clear title.
- Whenever one needs to prove ownership to the land, the title reports are required at every instance.
- Several deeds could be registered for a particular plan. At such instance, the first deed gathers a more recognition it been registered first, despite it being a forget document.
- No one is legally bound either to take the responsibility of the deed or to asset it.
- Due to the doubts of this deed system transactions down with the financial institution such as banks, becomes difficult.
- The difficulty in making the deed and investment, hinders the development of land as well as the person himself.
- The country lacks an unique system to ensure the ownership which cause to create various problems and deficiencies.
- As there is no procedure in our country to obtain data on state as well as private lands, it has become difficult for the Government Institutions and Departments to implement development plans.
- The land resource of the country has not been mapped in detail.
- The land resource of the country is not indicated in maps in detail.

Discussed above are only a few disadvantages of the existing deeds registration system and the general public has the practical experience on the short comings of the existing method.

It is pertinent to mention that 62% of the murders have been caused due to land disputes. Also nearly 19086 cases filed in the courts are related to land disputes. Most of these cases have been in the courts for more than of 30 years. 284 cases are heard from 20 to 30 years, 2538 cases between 10 to 20 years. In addition there also are 21692 partition cases pending in our courts. Of them 99 cases have been heard more than 30 years. 690 cases are heard between 30 to 20 years, 4856 cases between 20-10 years while 5287 cases between 10-5 years.

As the transactions with recognized banks and financial institutions have become difficult, the public is completed to take loans through unsecured ways. Such circumstance not only hinders their prosperity but also trap them in forge transaction. If a land, which paves way for development through investing it, would leave to be a fallow land it would be a loss to both you and your country.

### **Benefits to the country through Title Registration**

The benefits reaped by the nation through this method are twofold, namely,

Direct benefits

Indirect long term benefits

#### **(a) Direct benefits**

- Ensure the legal title free from doubt and uncertainty.
- Assurance by the state on the accuracy and reliability of the land title.
- No need to waste the time running after legal advice when purchasing or selling a land with a title Certificate. Accordingly land transaction could be made quickly and easily at a reliable manner.
- Removal of impediments to land development. Since the ownership is clear and allow quick and efficient land transactions.
- In transaction title of a period of prior 30 years is checked earlier, but under this method steps shall not be taken. Accordingly the land could be easily used for credit and mortgage, which would create speedy progress.
- Minimize land disputes, murders, and conflicts pertaining to land.
- The title certificate is not complicated as the deed. Therefore the public could educate on the Land title.

- Each certificate contains a simple, clear plan, which the owner himself could recognize the location of his own land.
- Only the government issues the Title Certificate which minimizes forgeries and disputes related to land.
- A database is maintained on every land plot of the country, therefore the future development activities could be done at optimal level.

**(b) Indirect long term benefits**

- A major criterion is the long term reduction of poverty.
- Creation of self-confidence and pride in the public through the realization of the real value of their own land.
- Gradual minimization of forgeries in relation to land documentation.
- Upliftment of living standards of the people with the increase in their income as a result of investment possibilities through simple land transactions.
- Strengthening of the land market.
- Increase in national productivity and economic growth rate through the gradual rise in national income.
- Identifying the resources of the land.
- Protection of natural resources and assessment of their value.
- Identification of land resources of the country and prevention from fraudulent use of land.
- It is an investment for the future generations which could help in the certain of a prosperous life.

**Introduction to the Land Titling Project**

The Registration of Title Act. No. 21 of 1998 is considered an important Act, which laid the foundation for a gradual transformation of the existing land tenure systems and land management systems of Sri Lanka, enabling the use of land resources more efficiently and effectively for economic growth and development. Under the provision of this Act, the Department of Land Settlement initiated the “Title Registration Pilot Project” in 1998 with the collaboration of the Survey Department in a few selected villages situated in three Divisional Secretary Divisions (DSDs) of Divulapitiya in the Gampaha District, Udapalatha in the Kandy District and Balangoda in the Rathnapura District. The main task of this project is to issue legally valid Title Certificates for each land parcel in the country to replace the existing deeds, after surveying all the land parcels and preparing the cadastral maps (Udakandage, 1998 P. 53). This Title Registration Project, since its initiation in 1998 was implemented by the Department of Land Settlement funds provided by the government of Sri Lanka until it’s suspended in Mid-2002.



In order to make this existing project more efficient and effective, the World Bank agreed to provide funds (together with IDA) for a three year learning and innovative project, which was to be implemented from July 2001 to the end of June 2004. The Title Registration system, which was being implemented by the Department of Land Settlement, was officially suspended in June 2002, enabling the full implementation of a new Land Titling and Related Services Project (LTRSP) on a pilot basis, funded by the World Bank. The same DSDs, namely, Divulapitiya, Udapalatha and Balangoda were selected as the three pilot project areas of the World Bank funded LTRSP. The project related activities are being implemented in newly selected villages situated in these three DSDs under the directions of LTRSP Office established in the Ministry of Lands.

The main development objective of the long term LTRSP which will be implemented nationally after the current pilot project is to support the improvement of socio-economic and environmental conditions of the people of Sri Lanka by raising the economic productivity of the land resources. The project also aims at generating several positive effects and impacts through the titling program as envisaged in the project implementation plan. They are;

Creation of a conducive environment to increase agricultural productivity and other sources of income per unit of land, providing security of tenure and effective land transactions and management systems.

Enhance savings both for the state and the people by reducing land disputes and transaction costs.

Create an opportunity for land holders to generate more revenue through efficient utilization of land resources by providing them with a greater control over the management of their own land and through the provision of market choices over optimal utilization of their land holdings (sales, lease etc.). This will facilitate access to capital under simplified credit arrangements.

Provide an opportunity for the state to generate more revenue through the efficient assessment and collection of stamp duties and taxes and also through fees collected from increased transactions.

Creating a of significant impact on the economy by introducing a more secure and less time consuming land management and administration system.

It is assumed that the owners of the land parcels may have used their title certificates for various transaction purposes as expected by the LTRSP. According to this assumption, we would be able to identify the emerging social and economic effects even during the implementation period of the pilot project. However, such effects of the new title certificates may not be positive in all cases and there may be unanticipated negative repercussions. Therefore, undertaking an evaluation study to identify the effects of the pilot land titling program and its potential impacts has become essential. The findings of such a study would be useful to introduce mid-course corrections to the on-going program and design a more effective long-term titling program.

### **Bimsaviya –Sri Lankan National Land Title Registration Program**

“Bimsaviya” program has been implemented by the Ministry of Land and Land Development under the provisions of the Title Registration Act No.21 of 1998 with a view to registering every inch of land of Sri Lanka. Under this program all the lands are surveyed and demarcated and then a certificate is issued ensuring the title of the land. The objective of the “Bimsaviya” program are to pave the way for the General Public to lead a prosperous life through ensuring ownership to land and making their land a strength to themselves, proper development of land, earn the capital for their future development utilizing land as an investment, and granting more opportunities for individuals development.

Through this program, the lands are registered through a formal procedure, after settling and ensuring the ownership and actions are taken to solve the issues pertaining to the lands disposed through the government and government institutions, minimize land disputes by ensuring boundaries, grand opportunity to formal land management through establishing a land database. Accordingly this program would greatly contribute to the sustainable development of the country as the program paves the way for empowering the people economically.

Survey Department, Land Settlement Department, Land Commissioner General’s Departments falling under the purview of the Ministry of Land and Land Development and the Registrar General’s Department falling under the purview of Public Administration and Home Affairs have been joint together in launching this project and some another public institutions also will cooperate where necessary.

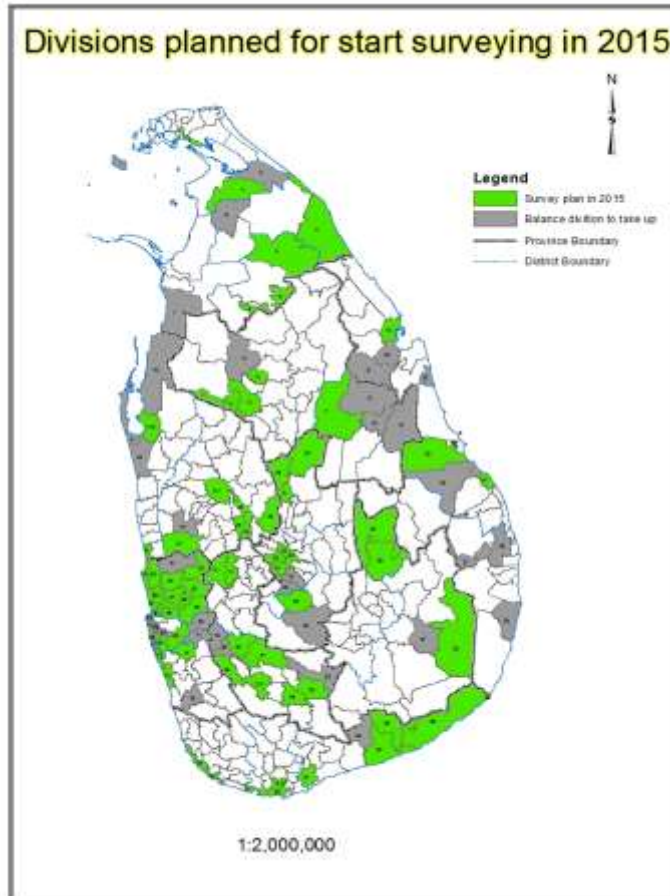
At this program Survey Department surveys and demarcates every plot of land and prepares cadastral maps while the Land Settlement Department

investigates the ownership to land and determines the title. The Land Commissioner General's Department contributes this program by settling the title to the land by solving land related problems. The Registrar General's Department registers the land and title and issues a Title Certificate base on that data.

Mahaweli Authority of Sri Lanka and Land Reform Commission also contribute this program. It is expected to cover the whole country under this new program within a period of fifteen years. Divisional Officers of these Departments have been established in relevant areas and collective contribution of all these offices is highly essential in fulfillment of this program. Bimsaviya Division of the Ministry coordinates and assesses the activities of the said Institution and policy decisions are taken through the Bimsaviya Monitoring Committee. Ministry of Land and Land Development coordinate the institutions on National level. Activities pertaining to quantitative and qualitative progress review of the implemented program and the future action taken accordingly are also conducted. Also activities such as preparation of plans on land title registration and progress monitoring and reporting are conducted under the directions of the Secretary to the Ministry.

Grating remedial measures for the issues arising pertaining to land, on district level and establishment of a Land Database on land management are also another important objectives avoiding the delays caused due to the dearth of the Surveyors through taking the assistance if the private sector. This programme has been launched in 18 Divisional Secretary's Divisions and solving the disputes on State lands are been handled in these Divisions. Surveying and investigation activities are been launched in 17 Divisional Secretary's Divisions. Currently it is operational in forty five (45) Divisional Secretary areas. All the surveys carried out for alienation of state lands are carried out according to relevant standards and Cadastral Maps are prepared. Programme in issuing Title Certificate to the lands alienated by the government has been commenced in collaboration with Land Commissioner General these activities have also been commenced in Northern and Eastern Province in addition to operational areas in other provinces. Faster method of surveying and land identification to be developed as Cadastral Surveys take considerably long time. Originally develop an initial cadastre and improve it with time. A complete land register including information on each land will have to be established. Titles, Deeds and even lands without any deed or proper ownership will have to be recorded. There are advantages and disadvantages in title registration system. Document registration system is simpler and flexible in contrast, title Registration is rigid. Issues faced at present are the cost and time taken for sub divisions. This process need to

make more efficient and economical that every land owner will be able to adhere to law. If not there again will be informal transactions making system ineffective.



**Bim Saviya related Issues and remedial action**  
**Information on land surveyed, determinations made and registered under Registration of Title**

Description	Project 2002-2005	Bim-Saviya 2006-2014	Total
Land Parcels Surveyed	117,943	862,301	980,244
Determinations	22,828	454,853	477,681
Registered and title issued	22,828	382,985	405,813

Bim saviya programme 2014

Presently the conversion rate is about 50%. The issues which mostly the related issues are

Ownership not clear

Boundary / ownership disputes

Owner not found / owner abroad / claims not received

Extent differences with new survey and deed

Court cases

Co-ownership

Temple lands

### **Need of continuation of dual registration system**

Considering the results of the registration process, only about 50% of the lands have been registered in the new system. The others will have to stay in the document registration system until they will be eligible to get into new system. Incentives should be given to encourage the others to get into Title Registration System

### **Need of strong adjudication process**

There are many disputes related to lands which can be settled by mediation. Therefore a strong mediation and dispute resolution activities is a must. These agreements are required to be made in a more binding manner as it is seen after some time the owners change their minds. Therefore the agreement needs to make legally binding by some means.

### **Dispute resolution by a Land Tribunal**

Similarly there are a significant number of land disputes which cannot be solved amicably. These will need a judicial decision and a quasi judicial body called land tribunal is proposed to be established. Land Tribunal is like a land court appointed by Judicial Service commission, Chairman can be a judge or an experience lawyer and there can two selected ex officio members representing survey and adjudication departments. This need changes in legislation and will take some time to implement.

### **Better public awareness and public participation**

Public awareness has been poor. Better way of public awareness is useful in this regard. When an area is taken, all relevant staff should be available to public conveniently. Support of community based organizations like farmer organizations, welfare organizations can be effectively used.

### **Development of a Multipurpose cadaster and participation of stakeholders**

Cadaster once prepared, can not only be used for land registration. It can be used as a base for many other activities and databases. As an example land value database can be developed taking cadastral map as the base. Local Government authorities can maintain their assessment record taking the cadaster as the base. Banks and financial institutions will find this database very useful to them and will be able to use this very effectively.

### **Land Information System**

A comprehensive land information system showing locations of land parcels, their nature, ownership, rights, restrictions, value, land use and other relevant attributes. Survey Department has already prepared a similar information system showing each land parcel surveyed, its area, ownership, name of land at present. Other organizations can add value to this. If zoning information can be added to this it will be beneficial to general public, local government authorities, land owners to know the rights and restrictions and other environmental law enforcing authorities. Address of the web site is [www.lis.survey.gov.lk](http://www.lis.survey.gov.lk). Many other information about lands and maps also can be obtained from this web site.

### **Conclusion**

A single register containing all lands, their boundaries to a certain accuracy, ownership, use and extent is to be prepared and maintained at national level. Ownership can be by title, deed, prescription or simply by occupation. Registration can be different but they are shown in one land information system. It allows identification of land parcel and the system of registration associated. A deed also can be connected to the land information system with proper and more reliable identification of land and allow an improvement to deed registration system. There is no change in legislation is necessary and this can be applied without any implications once the Land Information System is available. As all the land surveys carried out in Sri Lanka are to be connected to this LIS and this will be the most utilized information system in Sri Lanka in near future.

Cadastral Surveys and conversion of deed to title can be carried out as a separate activity by Title Settlement Department and this information base. Ownership and other initial information can be collected through Grama Niladharis. This information can be updated and quality to be improved when moving from one system to the other. Therefore the most important and critical activity in this exercise is formulation of a Land Parcel Fabric identifying each land parcel including basic information on present nature of

ownership and the owner, rights and restrictions related, other information like land value and previous survey plans. Adjudication and determination activities will follow and the database will be updated whenever a change takes place.

**References –**

- Land Commission 1983- Report of 3<sup>rd</sup> Land Commission, 1983
- Special Committee - Report of the Special Committee appointed to review Title Registration – 2014 June
- Udakandage, H., Title Registration in Sri Lanka, 1998

## A Grey Area in Practice of Real Estate Valuation: Case of the Rent Act

P.W.Senaratne<sup>1</sup>

<sup>1</sup>Former Govt. Chief Valuer

[senaratne08@yahoo.com](mailto:senaratne08@yahoo.com)

### 1. Introduction

Misnomer, misapprehension, misinterpretation and misguidance have resulted creation of grey areas in active valuation practice in our country. Some of the identified grey areas are as under.

1. Payment of compensation for acquired properties under Land Acquisition Act when they are occupied by protected tenants under the Rent Act.
2. Affect of Street Lines and Building limits to Market Value in Mortgage Valuations.
3. Taking buildings under construction for mortgage purpose.
4. Valuation of BOI lands for mortgage purpose
5. Adopting so called “four six eight method” for assessment of Rent.

Only above (1) is dealt with in this rationalization.

Valuation is considered as an opinion expressed of Market Value of a property. International Valuation Standards collaborated with Manual of Valuation by the Royal Institution of Chartered Surveyors, commonly known as Red Book and numerous textbooks interpret Market Value of a property.

### The Concept of Market Value

The concept of *Market Value* reflects the collective perceptions and actions of a market and is the basis for valuing most of resources in market-based economies. Although precise definition may vary, the Market Value concept is commonly understood and applied.

1.2 A *market* is the environment in which goods and service trade between buyers and sellers through mechanism. The concept of market implies that goods and/or services may be traded among buyers and sellers without undue restrictions on their activities. Each party will respond to supply-demand relationship and other price-setting factors as well as to the party's own capacities and knowledge, understanding of the relative utility of the goods and/or services, and individual needs and desires. A market can be local, regional, national, or international.



**Value** is an economic concept referring to the price most likely to be concluded by the buyers and sellers of a good or service that is available for purchase. Value is not a fact, but an estimate of the likely price to be paid for goods and services at a given time in accordance with a particular definition of value. The economic concept of value reflects a market's view of the benefits that accrue to one who owns the goods or receives the services as of the effective date of valuation.

**Value** is therefore a hypothetical price, and the hypothesis on which the value is estimated is determined by the valuation basis adopted. The basis of valuation is defined in International Valuation Standards as a statement of the fundamental measurement principles of a valuation on a specified date. A basis of value defines the nature of the hypothetical transaction. A basis of value is not a description of the method or approach used to produce the estimate, and neither does it describe the state or condition in which asset is assumed to be transferred. It is of paramount importance to the use and understanding of valuation that the basis of value be clearly disclosed, and that it is a basis that is appropriate to the particular valuation assignment. A change in the basis of value can have a material effect on the valuation.

The value concept contemplates a monetary sum associated with a transaction. However, sale of the property valued is not a condition requisite to estimating the price for which property should sell if it were sold on the date of valuation under conditions prescribed in the definition of *Market Value*.

The **Market Value** of real estate is a representation of its market-recognised utility rather than its purely physical status. The utility of assets to a given entity or individual may differ from that which would be recognized by the market or by a particular industry.

**Market Value** is a representation of value in exchange, or amount a property would bring if offered for sale in the open market at the date of valuation under circumstances that meet the requirements of the *market value* definition. To estimate market value, a valuer must first determine highest and best use or, most probable use. That use may be for continuation of a property's existing use or for some alternative use. These determinations are made from market evidence.

Land is regarded as a permanent asset, but improvements upon or to the land have a finite life. Because of the immobility of land, each real estate parcel possesses a unique location. Land's permanence also means that it will

normally be expected to outlast uses and improvements, which have a finite life.

The unique characteristics of land determine its optimal utility. When improved land is valued separately from improvements to or upon the land, economic principles require that improvements to or on the land be valued as they contribute to or detract from the total value of the property. Thus, *Market Value* of the land based upon the “highest and best use” concept reflects the utility and the permanence of land in the context of a market, with improvements constituting the difference between land value alone and total *Market Value* as improved.

Most lands are valued as a combination of land and improvements. In such cases, the valuer will normally estimate *Market Value* by considering the highest and best use of the property as improved.

## **2. Highest And Best Use**

2.1. Highest and best use is defined as:

“The most probable use of a property which is physically possible, appropriately justified, legally permissible, financially feasible, and which results in the highest value of the property being valued”.

A use that is not legally permissible or physically possible cannot be considered a highest and best use. A use that is both legally permissible and physically possible may nevertheless an explanation by the valuer justifying why that use is reasonably probable. Once analysis establishes that one or more uses are reasonably probable uses, they are then tested for financial feasibility. The use that results in the highest value, in keeping with the other tests, is the highest and best use.

Application of this definition permits valuers to assess the effects of deterioration and obsolescence in buildings, the most appropriate improvements for land, the feasibility of rehabilitation and renovation projects, and many other valuation situations.

In markets characterised by extreme volatility or severe disequilibrium between supply and demand, the highest and best use of a property may be a holding for future use. In other situations, where several types of potential highest and best use are identifiable, the valuer should discuss such alternative uses and anticipated future income and expense levels. Where land use and zoning are in state of change, the immediate highest and best use of a property may be an interim use.

2.5. The concept of highest and best use is a fundamental and integral part of **Market Value** estimates.

### **Market Value**

3.1. In International Valuation Standards and also in Red Book by the RICS - Royal Institution of Chartered Surveyors, the **Market Value** is defined as:

“The estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm’s-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion”.

3.1.1 “*The estimated amount....*” Refers to a price expressed in terms of money (normally in the local currency), payable for the property in an arm’s-length transaction. Market Value is measured as the most probable price reasonably obtainable in the market on the date of valuation in keeping with the Market Value definition. It is the best price reasonably obtainable by the seller and the most advantageous price reasonably obtainable by the buyer. This estimate specifically excludes an estimated price inflated or deflated by special terms or circumstances such as atypical financing, sale and leaseback arrangements, special considerations or concessions granted by anyone associated with the sale, or any element of special value.

3.1.2 “*.....a property should exchange.....*” refers to the fact that the value of a property is an estimated amount rather than a predetermined amount or actual sale price. It is the price at which the market expects a transaction that meets all other elements of the Market Value definition should be completed on the date of valuation.

3.1.3. “*.....on the date of valuation.....*” requires that the estimated Market Value is time-specific as of a given date. Because markets and market conditions may change, the estimated value may be incorrect or inappropriate at another time. The valuation amount will reflect the actual market state and circumstances as of the effective valuation date, not as of either a past or future date. The definition also assumes simultaneous exchange completion of the contract for sale without any variation in price that might otherwise be made.

3.1.4. “*.....between a willing buyer....*” refers to one who is motivated, but not compelled to buy. This buyer is neither over-eager nor determined to buy at any price. This buyer is also one who purchases in accordance with the realities of the current market and with current market expectations, rather

than in relation to an imaginary or hypothetical market that cannot be demonstrated or anticipated to exist. The assumed buyer would not pay a higher price than the market required. The present property owner is included among those who constitute “the market”. A valuer must not make unrealistic assumptions about market conditions nor assume a level of market value above that which is reasonably obtainable.

3.1.5. “.....*willing seller....*” is neither an over-eager nor a forced seller, prepared to sell at any price, nor one prepared to hold out for a price not considered reasonable in the current market. The willing seller is motivated to sell the property at market terms for the best price attainable in the (open) market after proper marketing, whatever that price may be. The factual circumstances of the actual property owner are not a part of this consideration because the ‘willing seller’ is a hypothetical owner.

3.1.6. “.....*in an arm’s length transaction.....*” is one between parties who do not have a particular or special relationship (for example, parent and subsidiary companies or landlord and tenant) that may make the price level uncharacteristic of the market or inflated because of an element of Special Value. The *Market Value* transaction is presumed to be between unrelated parties, each acting independently.

3.1.7. “.....*after proper marketing.....*” means that the property would be exposed to the market in the most appropriated manner to effect its disposal at the best price reasonably obtainable in accordance with the *Market Value* definition. The length of exposure time may vary with market conditions, but must be sufficient to allow the property to be brought to the attention of an adequate number of potential purchasers. The exposure period occurs prior to the valuation date.

3.1.8. “.....*wherein the parties had each acted knowledgably and prudently.....*:” presumes that both the willing buyer and willing seller are reasonably informed about the nature and characteristics of the property, its actual and potential uses and the state of the market as of the date of valuation. Each is further presumed to act for self-interest with that knowledge, and prudently to seek the best price for their respective positions in the transaction. Prudence is assessed by referring to the state of the market at the date of valuation, not with benefit of hindsight at some later date. It is not necessarily imprudent for a seller to sell property in a market with falling prices at a price that is lower than previous market levels. In such cases, as is true for other purchase and sale situations in markets with changing prices,

the prudent buyer or seller will act in accordance with the best market information available at the time.

3.1.9. “.....and without compulsion.....” establishes that each party is motivated to undertake the transaction, but neither is forced or unduly coerced to complete it.

3.2. The *Market Value* concept and definition are fundamental to all valuation practices. The concept of *Market Value* is not dependent on an actual transaction taking place on the date of valuation. Rather, *Market Value* is an estimate of the price that should be realised in a sale at the valuation date under conditions of the *Market Value* definition. *Market Value* is a representation of the price to which a buyer and seller would agree at that time under the *Market Value* definition, each previously having had time for investigation of other market opportunities and alternatives, and notwithstanding the fact that it may take some time to prepare formal contracts and related closing documents.

3.4. The concept of *Market Value* presumes a price negotiated in an open and competitive market, a circumstance that occasionally gives rise to the use of the adjective “*open*” before the words *Market Value*. The words *open* and *competitive* have no absolute meaning due to following reasons.

The market for one property could be an international market or a local market,

The market could consist of numerous buyers and sellers or

Could be one characterized by a limited number of participants,

The market in which the property is exposed for sale is not a definitionally restrictive or constricted market.

Stated conversely, the omission of the word “*open*” does not indicate that a transaction would be private or closed.

### **Market Value Defined In Land Acquisition Act No: 9 of 1950**

4.1. Section 45(1) defines Market Value as:

Market Value of a land in respect of which a notice under Sec: 7 has been published shall, subject as hereinafter provided, be the amount which the land might be expected to have realized if sold by a **willing seller** in the **open market** as a **separate entity** on the **date** of publication of that notice.

Provided that in determining that amount all such returns and assessments of income from or of the **capital or annual value** of, that land as have been

made or acquired in by the owner of that land for the purposes of any rate or tax imposed in respect of that land shall be taken into consideration.

Does a valuer/ does the authority assessing compensation give an attention to this proviso, specifically to the following, when valuation is done for payment of compensation?

recent purchase price of the property – declared for stamp duty purpose.

annual value of the property not objected by the landlord.

passing rent of the property and

declared income for taxation purpose.

4.2. When compared with the internationally accepted definition of *Market Value* as defined in International Valuation Standards, components lacking in this definition are as below.

4.2.1. *The estimated amount* is “be the amount which the land might be expected to have realized”

4.2.2. *a property should exchange* is “if sold”

4.2.3. *on the date of valuation* is “date of publication of that notice, i.e. Section 7 notice”

4.2.4. *between a willing buyer* – no indication

4.2.5. *willing seller is the “willing seller”*

4.2.6. *in an arm’s length transaction, after proper marketing, wherein the parties had each acted knowledgably and prudently* is “open market”

Additionally, the property should be sold as a “*separate entity*” in the open market.

Various interpretations have been given to *Market Value* in numerous Court Cases time to time. G.A. Southern Province V. Silva 3 NLR 235, Steven V. Munasinghe 42 NLR 446, Letchuman Chettiar V Colombo Municipal Council 30 NLR 97 (SC), Municipal Council Colombo v KMNSP Letchiman Chettiar (Privy Council) 53 NLR 135, Government Agent, Western Province, Vs. Archbishop (1913) 16 N.L.R. 395 and Government Agent, Kandy, Vs. Marikar Saibo (1911) 6 S.C.D. 36 are important.

4.3. The important concepts cropped up from above details can be summarised as below.

The concept of market implies that goods and/or services may be traded among buyers and sellers without undue restrictions on their activities.

The *Market Value* of real estate is a representation of its market-recognised utility rather than its purely physical status.

To estimate market value, a valuer must first determine highest and best use or, most probable use. That use may be for continuation of a property's existing use or for some alternative use.

Land is regarded as a permanent asset, but improvements upon or to the land have a finite life.

*Market Value* of the land based upon the "highest and best use" concept reflects the utility and the permanence of land in the context of a market, with improvements constituting the difference between land value alone and total *Market Value* as improved.

Market Value is measured as the most probable price reasonably obtainable in the market on the date of valuation in keeping with the Market Value definition. It is the best price reasonably obtainable by the seller and the most advantageous price reasonably obtainable by the buyer.

Both the willing buyer and willing seller are reasonably informed about the nature and characteristics of the property, its actual and potential uses and the state of the market as of the date of valuation.

4.4. They can be further summarized as below.

"The *Market Value* of real estate is a representation of its market-recognised utility rather than its purely physical status. To estimate market value, a valuer must first determine highest and best use or, most probable use. That use may be for continuation of a property's existing use or for some alternative use. *Market Value* of the land based upon the "highest and best use" concept reflects the utility and the permanence of land in the context of a market both the willing buyer and willing seller are reasonably informed about the nature and characteristics of the property, its actual and potential uses and the state of the market as of the date of valuation".

When a property is occupied by a tenant as of the date of valuation, what will be the effect of such an occupation, if the rent paid is a statutory rent?.

### **Tenant, Statutory Tenant and Protected Tenant**

Tenant - Tenant is a person who rents land or house from a landlord for a set time. Tenant more precisely may be weekly, monthly or annual, based on the term of the tenancy. Tenancy may be entered into through a verbal agreement or more legally through a written agreement. Rent is tenant's periodical payment for use of land or house or room. When a land is taken on rent, it is called a ground rent.

Statutory Tenant - Once a tenancy agreement comes to an end and the tenant does not leave the premises, a landlord can go for legal remedial measures if he had already followed legal procedure laid down in respective laws, such as registration of tenancy agreement with Rent Board etc. Otherwise, if the tenant is capable enough to prove his tenancy and go for protection under the Rent Act, he can become a Statutory Tenant.

Protected Tenant - When a tenancy encompasses to a legal framework or if a tenant is coming within the purview of the law relating to rent control of a country, a tenant becomes a Protected Tenant. In such instances the tenant enjoys privileges granted by the statute and some of the rights of the landlords too are protected by the same. In short, the rights, obligations and privileges of the tenants as well as the landlord are detailed out in such statutes.

To exactly know the cyclical effect of a tenant becoming a statutory tenant and then a protected tenant, knowledge in prevailing rent law of the country is of paramount importance.

## **Rent Law – History and Legal Framework**

### **History of Rent Controls in Sri Lanka**

The history of Rent Law goes back to the *Rent Restriction Ordinance No: 60 of 1942* and its subsequent amendments. The objectives of this ordinance were,

- to govern the relations of landlord and tenant,
- to restrict the increase of rent and
- to provide for matters incidental to such restriction.

This ordinance was not intended to be a permanent Statute in our Statute book and was introduced in order to protect the tenants during the period of Second World War and the scope of the Ordinance and its amendments was most restricted.

The main features of the Ordinance was;

That The Executive Committee of Local Administration was responsible for giving effect to the provisions and the Governor had very wide powers. was applicable to all premises in the areas in which the Ordinance was in operation and, Certain types of premises of which the landlord was a Local Authority were treated as excepted.



Provisions with regard to the rights of the landlord and the tenant were contained in section 3-7,8,9 and 10, which relate to the rent under the contract of tenancy and the restriction of the right of the landlord to institute an action for the ejection of the tenant.

Subsequently the Ordinance No.52 of 1947 was introduced and provision was made for the establishment of a Rent Board of Review.

Rent Restriction Act No: 52 of 1947

All provisions relating to rent laws, which were effective, were replaced by the Rent Restriction Act No.29 of 1948 and its amendments.

Rent Restriction Act No.29 of 1948

This is a far more comprehensive piece of legislation which introduced a number of provisions for the better protection of the rights of the landlord and the tenant.

**Main features of the Act were,**

Authority responsible - Minister of Local Government and Administration

Certain premises were declared to be excepted - identical to the provisions of Section 4 of Rent Act No.7 of 1972.

Special provision was made for the letting out of premises in separate parts.

Right of the tenant to sublet the premises or part thereof was restricted.

Provision was made with regard to amenities and repairs of premises.

Provisions with regard to ejection – identical to Rent Restriction Ordinance No:60 of 1942

Provision was made for continuance of the tenancy upon the death of the tenant

Provisions was made for the grant of certificate of tenancy by the landlord to the tenant

Appointment of “Authorised Officers” for the purpose of enforcing the provisions of the Act. The Rent Board was given the power to determine the authorised rent.

### **Rent Act No. 7 of 1972**

This Act replaced the existing laws relating to Rents. This is a more effective and comprehensive Act which defines the rights and duties of landlords and tenants more precisely. Also it provides more effective provisions and machinery for the enforcement and protection of the rights of landlords and tenants. Careful study of the Act shows that, by this Act, more emphasis was given to protect the rights of tenants whilst giving less importance to rights of the landlords.

The Act emphasized that the Legal Rent which could be recovered from a tenant for the properties coming within this Act was the Standard Rent or Authorised Rent as appropriate and charging or paying a rent exceeding the Standard Rent or Authorised Rent made illegal. Also the Rental Advances were restricted to three months legal rent.

Provisions relating to application of the Act, calculation of Standard Rent and Authorised Rent including rights of a Statutory Tenant are given below.

### **Standard Rent and Authorised Rent (SR & AR)**

SR or AR is a legal rent which has a legal definition. It is defined by the Rent Act No: 7 of 1972 as amended by the Rent (Amendment) Act No: 55 of 1980. An SR or AR can be determined and recovered only from residential and commercial remises which are coming within the following framework given in the Act.

1. By area: property should be within an area declared under the Act.
2. By property (unexcepted premises) : should be a residential or commercial premises coming within the purview of the Act.
3. Premises given on rent: landlord and tenant relationship should be established.
4. Determination by the Rent Board: authority determining Standard or Authorised rent is given to Rent Boards established under the Act.

Under Sec. 6, the authorized rent of any premises shall not be less than the authorized rent or the receivable rent of those premises, as the case may be, under the provisions of this Act as were in force on March 1, 1972.

The main objective of this attempt is to find the effect of protected tenant or statutory tenant under the Rent Act to the Market Value of a property.

### **Obtaining Vacant Possession**

When a property is occupied by a protected tenant under the Rent Act, it will affect to the Market Value of the property adversely, as only a legal rent can be recovered from such properties. Therefore to entangle "Rent" within the concept of "Market Value" or "Free Market Value", obtaining tenant free status is very vital. According to the Rent Act there are only two ways by which the vacant possession can be obtained.

1. Obtaining a demolition order
2. Ejection of tenant.

#### **6.5.1. Obtaining a demolition order**

##### **6.5.1.1. Section 18 -Rent (Amendment) Act No:55 of 1980**

The Commissioner of National Housing has power to authorize the demolition of residential buildings more than 50 years if he is satisfied that redevelopment of the premises where such buildings are situated is desirable for the realization of the optimum economic potential of such land.

The Commissioner shall specify,

The number of residential units that shall be constructed by such owner within such period or periods as may be determined by the Commissioner on the land on which the demolished building stood: and

- (b) (i) provide alternate accommodation for the tenant
- (ii) order the owner to pay to the tenant, such compensation as the Commissioner determines reasonable for loss of possession. Such compensation shall not be less than three times the authorised rent per annum of the building.

##### **6.5.1.2. Section 18 – Rent (Amendment) Act No:26 of 2002**

This Amendment is effective from October 25, 2002. Commissioner of National housing may authorize the owner to demolish buildings over 40 years old, subject to following conditions.

Order the owner to provide alternate accommodation to the tenant or to pay two years rent as an advance to find alternate accommodation by the tenant or

order the owner to pay to the tenant 10 years annual value of the premises as at the date of application for demolition or 20% of the market value of the premises as determined by the Chief Valuer or to pay Rs. 150,000, whichever is higher.

Under Sec. 18 (ii), *the compensation should be the reasonable amount not less than the amount determined as above.*

### **6.5.2. Ejection of tenant.**

To get a clear idea about the development of the history of ejectment cases under Rent Laws as most of the decided cases are based on the law prevailed before 1972, the provisions contained in previous statutes are given as under.

6.5.2.1. Rent Restriction Ordinance No:60 of 1942 & Rent Restriction Act No.29 of 1948      The landlord had the right to eject a tenant if; He obtained the permission of the Assessment Board to institute proceedings for the ejectment of the tenant; or

The rent had been in arrears for one month after it had become due; or  
The tenant had given notice to quit; or

(d) The premises were, in the opinion of the Court, reasonably required for occupation as a residence for the landlord or any member of the family of the landlord, or for the purposes of his trade, business, profession, vocation or employment; or

(e) The tenant or any person residing or lodging with him or being his sub-tenant had been guilty of conduct which is a nuisance or had been convicted of using the premises for an immoral or illegal purpose or had caused deterioration of the premises

### **6.5.2.2. Rent (Amendment) Act No:26 of 2002**

Under *Section 22 of this amendment*, an ejectment case can be filed in courts on following grounds, when the standard rent does not exceed Rs. 100/= per month,

1. The rent is in arrears for three months or more after it has become due,
2. Such premises are reasonably required for occupation as a residence for the landlord or any member of the family, or for the purpose of the trade, business, profession, vocation or employment of the landlord. For this purpose, prior to filing action in courts, a sum equivalent to ten year's rent or Rs. 150,000/= whichever is higher should be deposited with CNH and inform the CNH about the institution of such case.

In case of service tenants when their service is terminated.

Convicted for using the premises for illegal or immoral purposes or became guilty of conduct through courts which is a nuisance to adjoining occupant,

5. Structural alteration done without prior authorization in writing of the landlord and the relevant local authority.
6. Change of use partly or wholly,
7. Premise is required for development and a sum equivalent to ten years annual value or 20% of the market value as determined by the Chief Valuer or Rs. 150,000/= whichever is higher is deposited with CNH for payment to the tenant as compensation.

When the standard rent exceeds Rs. 100/= per month, ejectment cases can be filed on above grounds except that the rent is in arrears for one month.

### **Succession – Continuance of the tenancy upon the death of the tenant**

Succession or continuance of the tenancy upon the death of the tenant under Rent laws from the beginning is as below.

#### ***Rent Restriction Act No.29 of 1948***

Under Sec. 19, a notice had to be given within a specified period by the person who proposed to continue in occupation of the premises as a tenant

#### ***Rent Act No.7 of 1972***

Under Sec. 36 of the Act, the persons entitled to continue the tenancy on the death of the tenant are depending on the class of premises involved, more precisely defined.

It is not necessary for a person, who proposes to continue the tenancy, to give notice to the landlord to that effect and The termination of the contract of tenancy of the tenant prior to his death does not disentitle the persons, who are entitled to continue the tenancy, to continue the tenancy upon the death of the tenant, if at the time of his death he was in occupation of such premises.

### **6.7.Application of Provisions in Land Acquisition Regulations 2008 when an Acquired Property is occupied by a Statutory Tenant**

Regulation 1.4 stipulates as below.

“When an acquired building is occupied by a tenant/statutory tenant protected under the provisions of the Rent Act No: 7 of 1972 (as amended thereafter) the compensation should be ascertained in proportion having regard to the provisions of Rent (Amendment) Act No: 26 of 2002”.

The main reason for introduction of such a provision is the inadequacy of compensation determined under Part v1 of the Land Acquisition Act No: 9 of

1950 when a property is occupied by a protected tenant under the Rent Act, together with deprivation of monthly tenants for entitlement for compensation under Sec. 65 interpretation of “parties entitled for compensation”.

Although this provision was introduced as a Regulation effective from 17.03.2009, the same procedure was effective for properties where section 7 notice has been published on or after 24.10.2002, the effective date of the amendment, but entitlement is only for the owner and the tenant was not entitled for compensation under Section 65.

When National Involuntary Resettlement Policy (NIRP) was introduced by the government for development projects in 2001, all affected parties by acquisitions of lands for development projects were to be compensated in order to obtain foreign funds for such projects. In this instance “A Monthly Tenant” was not an exception as was precluded of compensation under Sec. 65.

Therefore it is necessary to study the history of payment of compensation when an acquired property is occupied by a protected tenant under the Rent Act No: 7 of 1972.

After introduction of the Rent Act No: 7 of 1972, the Chief Valuer brought the protected tenant into the Market Value definition in Sec. 45(1) of the Land Acquisition Act and the effect of protected tenant to assessment of Market Value based compensation was defined. In this regard, the process of valuation is important.

“Valuation is a process of finding the Present Value of a future income stream of an interest in a property based on the past information”

Market Value of any property depends on the yield or income derived from it.

Thus in theory, 
$$\text{Market Value} = \text{Net Income} \times \text{YP}$$

Net income is derived by deducting all expenses, a landlord has to incur to secure a rental income from a property, from the gross rent or the market rent. Rental value is assessed based on market evidence.

Market evidence is the passing rents of similar buildings in the open market and the methodology used to assess the rental value is called “Comparison Basis”. If a rent depends purely on market factors without any encumbrances, a valuation based on such a rent always reflects a real market situation. Similarly if a rent is encumbered by legal restrictions and

recoverable rent is determined as interpreted according to the prevailing law, a market value calculated based on such a low rent reflects a very much low value. This situation can be avoided only on a situation that a vacant possession could be obtained under the provisions given in such a law.

This situation was accepted by the court of law and the historic case where the compensation was assessed based on Authorised Rent is considered CL 944 decided by the Land Acquisition Board of Review (LABR).

**6.7.1. LABR Case No: CL 944**

The subject – Lot 1 in extent 35.21 perches containing a house and Lot 2 in extent 34.91 perches containing two houses, located along Quarry Road, Dehiwala were acquired. All three houses were occupied by protected tenants under the Rent Act and rents paid to the landlord were limited to the legal rent or Authorised Rent as determined under the Rent Act No: 7 of 1972. Taking legal rent as the market rent of the property the Chief Valuer assessed the compensation under Sec. 46(1) of the LA Act and accordingly the Acquiring Office made his Sec. 17 Award. Thus the Award under Sec. 17 was Rs. 11,900/=.

Owner appealed against this award to the LABR and the Chief Value on behalf of the Respondent argued that when a property is occupied by a protected tenant under the Rent Act, market rent should be based on Authorised Rent and accordingly the Market Value for compensation should be assessed. The LABR accepted this argument and after taking into account the excess land which could be buildable, the compensation calculated as below.

**Board Decision**

Value of Buildings (as determined by the Chief Valuer)	Rs. 11,900
Value of excess land - 16.50p @ Rs. 1,500/= p.p.	Rs. 24,750
15.32p @ Rs. 1,000/= p.p.	<u>Rs.15, 320</u>
	<u>Rs. 40,070</u>
Total Award by LABR	Rs. 51,970
Say	Rs. 52,000

This decision was considered as a landmark in history of valuation of this country and the summary of the final outcome is given below.

Valuation of tenanted properties should be on Authorised Rent Basis and Valuation of excess land should be considered if appropriate.

Same procedure was followed in subsequent acquisitions where the properties were occupied by protected tenants under the Rent Act and compensation was paid accordingly.

### **6.7.2. Subsequent LABR Decisions**

In 1990s the LABR adopted a different procedure and in CL 1108 adopted an approach of taking the average of two valuation as below in finding the Market Value of a property occupied by a tenant protected by the Rent Act and same approach adopted in some of the subsequent cases too.

MV (Compensation) = 50% of

1. Value on vacant possession basis
- plus
2. Value with the protected tenant in occupation

There were some instances where 55% of the above two was taken as compensation under Sec. 46(1).

### **6.7.3. Monthly Tenant to Become Statutory Tenant – Legal Background**

Contract of Tenancy - It is an agreement whereby one party agrees to give the use of immovable property on a rent to another for successive periods until it is terminated by a notice given by either party. Person gives the property is known as “Landlord” and Person who promises to pay the rent for the use of the immovable property is known as “Tenant”.

Letting of premises for a specific period – Common Law

It is possible for a landlord to let his premises on a lease for a fixed period of time and at the end of such period there is an obligation on the tenant to quit the said premises and deliver vacant possession to the landlord.

As determined by the Supreme Court in *Gunaratne v Thelenis*, 47 NLR 433 when a lease in respect of premises came to an end, and lessee does not leave the premises, the lessee becomes a statutory tenant.

Therefore, there is no obligation by the tenant to leave the premises at the end of the lease period, unless the legal procedure has been followed as specified in the Rent Act.

### **Registration of Lease Agreements**

To end the tenancy after a period of lease, under Sec. 29(2) of the Rent Act, the agreement should be registered with the respective Rent Board within one month.



According to the Sec. 2 of Prevention of Frauds Ordinance No: 7 of 1840, if the agreement is not attested by a notary, it will be of no force or avail in law for the reason that the letting is for a period exceeding one month.

As stated in Supreme Court Decisions, Hinniappuhamy v Kumarasinghe 59 NLR 566 and A.H.Samarakoon and others v H.V.Starrex and others 71 CLW 25, "Lease for a period exceeding one month must be attested by a Notary if it is to have any validity in law."

Under section 18 A – Rent (Amendment) Act No: 26 of 2002, Commissioner of National Housing may authorize the owner to demolish buildings over 40 years old, subject to following conditions.

Order the owner to provide alternate accommodation to the tenant or  
To pay two years rent as an advance to find alternate accommodation by the tenant or

order the owner to pay to the tenant a reasonable amount not less than 10 years annual value of the premises as at the date of application for demolition or

20% of the market value of the premises as determined by the Chief Valuer or

to pay Rs. 150,000, whichever is higher, as compensation

When properties occupied by protected tenants are acquired under the provisions of Land Acquisition Act, different situations can arise. So, the valuation process is explained under four different scenarios as below.

Scenario 01 when entire building is acquired and occupied by a protected tenant

Scenario 02 when a part of a tenanted property is acquired and Sec. 18A operates

Scenario 03 when front portion of a tenanted two story building is acquired

Scenario- 04 when front portion of a tenanted two story building is acquired and owner occupies on the upper floor

**Elaborative examples are given in Addendum 1.**

## 7.0. Conclusion

At the conclusion, three deferent eras are phenomenon for calculation of compensation when a property acquired is occupied by a protected tenant under the Rent Act.

Period 01 - from 1.3. 1972 to 24.10.2002

Period 02 - from 25.10.2002 to 16.03.2009 and

Period 03 - from 17.03,2009 and onwards

It is phenomenon that because of the possibility of obtaining a demolition order if the premises is over 40 years old, with regard to residential properties, only buildings constructed between 1975 and 1980 are coming within the purview, as residential premises constructed after 01.01.1980 are exempted. When commercial premises are concerned, generally, the Annual Value of buildings constructed after 1975 may exceeds relevant amount given in the Act. Ultimate result is the Rent Act will face its natural death, in the context of residential properties, in the year 2020.

## References:

- Denyer-Green, B., Compulsory Purchase and Compensation, Estate Gazette (1985)
- International Valuation Standards – Eighth Edition (2007)
- Rees, W.H. (Ed.), Valuation : Principles into Practice Estate Gazette (1984)
- The Red Book – Royal Institution of Chartered Surveyors (2014)

## Addendum 1

The following examples are given as a base to elaborate valuation procedures under scenario 01 - 04

6.7.3.1. Scenario 01 When entire building is acquired and occupied by a Protected Tenant

Example; The acquired land is in extent 20 perch with a residential building about 45 years old and occupied by a protected tenant. The building covers a floor area of 1000 square feet and used as a residential premises. It is located in a commercial area. The commercial rental value varies from Rs. 25/= per sq.ft to Rs. 40/= per sq.ft. and the residential rental value varies from Rs. 5/= to Rs. 7.50 per sq.ft. Commercial site value is around Rs. 500,000/= per perch.

Section 46(1) of the Land Acquisition Act says that compensation should be proportionate to the interests. For this purpose, firstly, the following values should be calculated.

Market Value of unencumbered freehold interest  
 Market Value of encumbered freehold interest (Landlord's Interest) and  
 Quantifiable value of statutory tenancy (Tenant's interest).  
 Then, the Market Value of unencumbered freehold interest should be  
 apportioned between the landlord and the tenant.

**01.1. Market value of unencumbered freehold interest**

(based on potential commercial value after demolition of building)

Land – 20P @ Rs.500,000/= p.p. Rs.10,000,000/=

Building - No value

MV of Premises, as it is, that could be given by the Chief Valuer under Sec. 18A of Rent (Amendment ) Act No: 26 of 2002 – practically based on following factors.

Strictly based on present use. i.e. residential use,

Strictly based on present condition – assuming proper repairs and maintenance not done,

Land and building taken together as “premises” which is given on Rent Act Valuation could be done only on “Investment Basis”

Thus no “Contractors Basis” could be applied

Minimum possible YP adopted for residential category as the building is to be demolished

Minimum possible rent to be assessed as the building is so old and to be demolished

Annual Income (F.A. 1000 sq.ft. @ Rs. 5/= p.sq.ft. x 12)	Rs. 60,000
Less: 25% for outgoing	<u>Rs. 15,000</u>
Net Income	Rs. 45,000
YP @ 5%	<u>20</u>

Market Value (Chief Valuer's valuation) Rs. 900,000

**Cost of obtaining vacant possession- Section 18 A**

Payment to tenant Rs. 150,000 or

20% of Chief Valuers' valuation Rs. 180,000 or

10 years of annual value Rs.3,450 x 10 Rs. 34,500

So, the highest amount is Rs. 180,000/=.

The **Reasonable amount not less than this amount** should be calculated. In a real situation, because of the statutory coverage by the Act, a tenant is enjoying a rental benefit between the Authorised Rent and Free Market Rent of the premises if not for statutory coverage. This benefit could be quantifiable. The value of this benefit reflects the reasonable amount and it is calculated as below.

**01.2. MV of Rental Benefit of Statutory Tenancy**

Annual Income (free market rent)	Rs. 60,000
Less: Authorized Rent (as estimated)	<u>Rs. 3,000</u>
∴ Rental benefit of statutory tenancy	Rs. 57,000
YP @ 5% for 20 years (minimum YP)	<u>12.4622</u>
<b>Gross Value</b>	Rs. 710,345
Less: 25% for impact on marketability (statutory tenancy cannot be sold other than passing on to successor given in sec. 36)	<u>0.75</u>
<b>Market Value</b> of rental benefit of statutory tenant	Rs. 532,759
<b>Say</b>	<b>Rs. 533,000</b>

**MV of Encumbered Freehold Interest**

Market Value of unencumbered freehold interest	Rs. 10,000,000
<b>Less:</b>	
1. Compensation for tenant (as estimated above)	Rs. 533,000
2. Cost of litigation (as estimated)	<u>Rs. 75,000</u>
	<u>Rs. 608,000</u>
Present net MV of Encumbered Freehold Interest without considering the time period for process of obtaining a demolition order	Rs. 9,392,000
Differ @ 10% for 2 years (borrowing rate and time period for process of obtaining a demolition order)	<u>0.8264</u>

**Market Value of Encumbered Freehold Interest Rs. 7,761,549**

**Apportionment****Landlord's Share**

-----		7,761,549
	X 10,000,000 =	Rs. 9,357,409
		7,761,549 + 533,000

**Tenant's Share**

-----		533,000
	X 10,000,000 =	<b>Rs. 642,591</b>
		7,761,549 + 533,000

**6.7.3.2. Scenario 02 - When a Part of a Tenanted Property is Acquired and Sec. 18A operates**

The following example is taken as a base to elaborate valuation procedures under above scenario.

Example : The acquired portion is in extent 05 perch with a part of a residential building about 45 years old and occupied by a protected tenant.

The acquired portion of the building covers a floor area of 300 square feet and used as a residential premises. It is located in a commercial area. The commercial rental value varies from Rs. 25/= per sq.ft to Rs. 40/= per sq.ft. and the residential rental value varies from Rs. 5/= to Rs. 7.50 per sq.ft. Commercial site value is around Rs. 500,000/= per perch.

**02.1. Market value of Unencumbered Freehold Interest**

Land - 5P @ Rs. 500,000/= p.p.	Rs. 2,500,000/=
Building - No value	

**02.2. MV of Part Acquired – Sec. 18A of Rent (Amendment ) Act No: 26 of 2002 (Probable Chief Valuer’s Valuation)**

Annual Income (300xRs.5/=p.sq.ft.x12)	Rs. 18,000
Less: 25% for outgoings	<u>Rs. 4,500</u>
Net Income	Rs. 13,500
YP @ 5% (minimum YP)	<u>20</u>
Market Value	Rs. 270,000

**02.2.1. Cost of obtaining vacant possession- Section 18 A**

Payment to tenant	Rs. 150,000 or
20% of Chief Valuers’ valuation	Rs. 54,000 or
10 years of annual value (taken proportionately)	
<u>Rs. 3,450 x 10 x 300sq.ft.</u>	Rs. 10,350
1000 sq.ft.	

**02.2.2. Reasonable amount not less than above**

**02.02.2.1. MV of Rental Benefit of Statutory Tenancy**

Annual Income	Rs. 18,000
Less: Authorized Rent ( <u>Rs. 3,000x300</u> )	<u>Rs. 900</u>
1000	
Rental benefit of statutory tenancy	Rs.17,100
YP @ 5% for 20 years (estimated life span)	<u>12.4622</u>
<b>Gross Value</b>	Rs.213,104
Less:25% for impact on marketability	<u>0.75</u>
<b>Market Value</b>	Rs.159,828
<b>Say</b>	<b>Rs.160,000</b>

**02.2.3. MV of Encumbered Freehold Interest**

Unencumbered Market Value	Rs. 2,500,000
<b>Less:</b> Compensation for tenant	Rs. 160,000
Litigation cost	<u>Rs. 75,000</u>
	<u>Rs. 230,000</u>
	Rs. 2,270,000
Differ @ 10% for 2 years	<u>0.8264</u>
<b>Market Value</b>	<b>Rs. 1,875,928</b>

**02.2.4. Apportionment**

**02.2.4.1. Landlord's Share**

$$\begin{array}{r}
 1,875,928 \\
 \text{-----} \times 2,500,000 \\
 1,875,928 + 160,000 \\
 \qquad \qquad \qquad = \text{Rs. } 2,303,529
 \end{array}$$

**02.2.4.2. Tenant's Share**

$$\begin{array}{r}
 160,000 \\
 \text{-----} \times 2,500,000 = \text{Rs. } 196,471 \\
 1,875,928 + 160,000
 \end{array}$$

**6.7.3.3. Scenario 03 – When Front Portion of a Tenanted Two Story Building is Acquired**

Similar process as Scenario – 2

Here, the Tenant will get a higher proportion of Market Value as the upper floor too is involved.

**6.7.3.4. Scenario- 04 – When Front Portion of a Tenanted Two Story Building is Acquired and owner occupies UF**

Valuation Process – Ground floor portion on tenanted basis as Scenario 02 and upper floor on open market value basis.

## An Analysis on Residential Land Price Determination

H M Premathilake<sup>1</sup>

<sup>1</sup>Senior Lecturer, Department of Estate Management and Valuation

[ranmalhewa@gmail.com](mailto:ranmalhewa@gmail.com)

### 1. Introduction

At present, Colombo city consists of 47 administrative municipal wards. The study area is the Narahenpita Ward of Colombo Municipal Council with a potential for development which can be described as an inter-development segment of the Colombo city. It consists of the land between Kotte Sri Jayawardenapura Municipal area and the already developed Colombo Municipal area. With the shifting of administrative capital to Sri Jayawardenapura, of Borella and Narahenpita has increased became important areas.

Narahenpita Ward in Colombo has 176.48 hectares of land, of which 24 percent of land (Ridgeway Golf Links) is occupied by the Golf club which is the dominant land use of the area (UDA, 1998). Land use Survey - 1996, conducted by the Urban Development Authority identified the different land use categories in the city of Colombo (Table 1). Existing land use pattern of the Narehenpita Ward of Colombo Municipal Council as identified by the UDA land use survey 1996 is given in Table 2. According to this table highest percentage of the total land area (24.5 percent) is utilized for cultural, environmental and recreational use (dominant land use is the Golf links) in this ward.

**Table 1 General Land use Pattern-City of Colombo - 1996**

Type of Land use	Extent (Ha)	Percentage
Residential	1401.56	37.58
Manufacturing Industries	0148.53	03.98
Transport, Communication and Utilities	0982.56	26.35
Commercial	0225.39	06.04
Cultural, Environmental and	0249.44	06.69
Recreational	0411.40	11.03
Institutional	0262.24	07.03
Vacant and Non-Urban uses	0048.12	01.29
Other Urban uses		
<b>Total</b>	<b>3729.24</b>	<b>100.00</b>

Source : Land use Survey, 1996 Urban Development Authority.

**Table 2 Existing Land use Pattern - Narahenpita**

Type of Land use	Extent (Ha)	Percentage
Residential	39.06	22.13
Manufacturing Industries	01.93	01.09
Transport, Communication and Utilities	36.90	20.91
Commercial	02.43	01.38
Cultural, Environmental and Recreational	43.23	24.50
Institutional	30.43	17.24
Vacant and Non-Urban uses	11.92	06.76
Other Urban uses	10.58	05.99
<b>Total</b>	<b>176.48</b>	<b>100.00</b>

Source: Compiled form UDA Land use Survey, 1996,

Colombo city has a land area of 3731 ha and out of this private land owners have claimed about 73% of the total land extent and the remainder is distributed among the state and the Colombo Municipality as 21% and 6% respectively (CMC, 1988). Lands owned by the Colombo Municipal Council are utilized mainly for parks, open spaces, play grounds, cemeteries, community centres, libraries and clinics. However, most of the state lands have been occupied by the various ministries, departments and corporations (Premathilaka, 1998).

Sri Lanka is committed to an open market economy, which implies development through perfectly competitive markets. Land which is a scarce natural resource plays a key role in development. If the land markets operates freely, it would give rise to the best use and highest value of land from the community's view point. (Lichfield, 1975). Therefore, the price influences the intensity of land use. Hence, the price paid for the land is an important parameter in the development decision. Therefore, it is very important to study how the land market price/value is determined in the open market.

Price has been defined as the money paid by a purchaser to a vendor in a transaction where an asset such as a property is purchased. The price paid may become comparable market data for valuers to interpret when valuing other properties (David Isaac & John O' Leavy – 2012).

Normally prices are the signals which indicate changes in the conditions of demand and supply. A price represents the amount of particular purchaser agrees to pay and a particular seller agrees to accept under the circumstances



surrounding a transaction. Under perfect market conditions value in use would equate with value in exchange and price would be synonymous with value. In Land Economics price is a word of many meanings (Premathilaka, 1998).

Asking price is the first indication by the land seller, how much is wanted. This is a very commonly used term and is a different concept and it relates to bargaining stances which can vary a great deal (Folke, 1987). Therefore asking price is not the value or the market price. Transaction price is what is actually paid, regardless of how appropriate it may be to the situation (Harvey, 1996). Whenever transaction price differ from market price/value, this may of course reflect nothing more than a mistake by one of the parties (Folke, 1987).

Different persons may have different subjective valuations of the same property rights (estates). The potential buyers subjective valuation will fix the maximum price (ceiling price) which he would be prepared to pay for the property right in the last resort. The potential sellers subjective valuation will in the same way fix the minimum price (floor price) which he will be prepared to accept in the last resort (Lean and Goodall, 1966). The two subjective valuations will place a limitation on possible movements in the market price. The shrewd buyer or seller will try to estimate the other persons valuations and try to push the value as close to it as possible. Although the market price determined collectively by the subjective valuations of all the potential buyers and sellers, it will appear to the individual as if the price is fixed independently of him and he has to accept it as given (Lean and Goodall, 1966).

Market value/price is what the property would sell for in an average situation assuming that both parties had full information as well as full freedom of choice (Folke, 1987). If land markets function effectively price signals can provide the information needed for efficient land allocation where markets are defective, price signals work at less than full efficiency (Harvey, 1996). Effective functioning of land market depends on the pattern of land ownership and distribution, land titling and registration, availability of a survey plan to identify the property with the boundaries, reduced transaction costs, ability to obtain financial facilities and easy access to other relevant information (Premathilaka, 1998).

Research in to land value determination has a long history beginning with Ricardo (1817) and Von Thunen (1826), progressing through Marshall (1920) and Finally focusing on urban land markets (Alonso, 1964).

The value of a particular site is based on the advantage that site has over the other sites. The locational advantage results in additional profits for the user of the site. The location theory of land use was initially developed in the mid 18th century by Von Thunen, a farmer. This is aptly described by Von Thunen (1826) in his book "Der Isolierte Staat" as follows:

" If we investigate the reasons why site rent increases towards the centre of the city. We will find it is the Labour Saving, the greater convenience and the reduction of the loss of time in connection with the pursuit of business".

In explaining the cause of different land values within an urban area Hurd (1903) suggested that :

"Since value depends on economic rent, and rent on location, and location on convenience, and convenience on nearness, we may eliminate the intermediate steps and say that value depends on nearness".

Hurd's statement that value depends on nearness implies accessibility. Accessibility is usually measured in terms of distance or time of travel (the second being more preferred measure).

The location of a plot determines its value. The location of a plot, for example it's distance from the city centre, main roads and railway or green space, is of great significance. The relative importance of each factor depends on the intended use of the plot. In a residential area for example, access to public transport or green space may be more important than access to main roads, other factors include the size and form of a plot, slope of land, the condition of the soil (Williams, et. al., 1994).

Based on extensive literature review of the factors affecting property values in urban areas, some of the important components of property values can be listed as follows:

(a) Physical factors external to the property. The geographic location, the environment, (class of residents, and the type of residences in the immediate neighborhood and proximity to places of importance) public transport and infrastructural services such as electricity, water, sewerage drainage and telephone services.

Factors integral to the property, the physical factors of the property (lie of the land, soil, shape and size) accessibility and economic and legal attributes and/or liabilities.

The national and local economic conditions which determine the level of property values. Land values are also influenced by the social, cultural factors and life pattern of the people in the particular area.

The land values can be changed with the influence of above described factors. Land value is generated in the minds of individuals who constitute a land market. In the land market there are those who wish to sell lands and those who wish to buy lands. The buyers constitute the demand side of the market, the sellers the supply side.

Typically four inter dependent economic factors create value. They are utility, scarcity, desire and effective purchasing power. All four factors must be present for a property to have value. The complex interaction of the said four factors that create value is reflected in the basic economic principle of supply and demand (The Appraisal Institute of Chicago, 2001).

The interaction between the supply and demand for property generates exchange prices and valuations are estimates of those prices. Value is thus an economic concept and valuers are primarily concerned with how market participants measure value (Wyatt, 2013).

The property market, as any other market, is composed of a whole range of subjective valuations, each of which may be regularly changing. Those of both buyers and sellers combine and interact to give the general level of values. The price of a property in the market will depend upon this interaction and will tend towards the point at which the number of potential purchasers and that of potential sellers is equal (Millington, 2000).

The value of a property at any point in time shows the price at which supply and demand are equal the price at which buyers and sellers who are prepared to do business are equal in number (Isaac & Oileary, 2012).

The value of a property therefore gives an indication of both the degree of scarcity of that property and of its utility when compared with other properties.

Typically a property seller's goal is to sell the property at the highest possible price in the shortest possible time. These two objectives are

generally reconciled with the setting of the listing price. A listing price that is too high may have the effect of both lengthening the selling time and limiting the pool of potential buyers. Setting the listing price too low may minimize the selling time but may also result in a selling price lower than what otherwise could be attained. Market value of a property is simply the price at which a property will sell within a reasonable period of time. On average reasonable period of time means 45 to 90 days depending on property liquidity. The property liquidity means the ease with which it can be converted into cash. More liquid property can be sold more quickly. Property liquidity depends on market participants search effort which is determined by market conditions, physical and legal characteristics of the property, the size of the selling firm and listing price. Property with higher liquidity sell for higher prices and that selling prices increase with sellers search effort. Sometimes increases in the listing price increase time-on-the market. (Personal communication author had with land selling firms).

## 2. Methodology

It is assumed that there exists a linear relationship between the value of a land (dependent variable : Y ) and K number of independent variables, namely  $X_1$  to  $X_k$  . Thus the functional relationship between land value and selected independent variables is established as follows.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + c \quad (1)$$

Where Y is the land value in rupees per perch and X's are the independent variables.

The location of a plot, determines its values. The location of a residential plot, for example, its distance from the city Centre, access to public transport, infrastructure facilities and green space, other factors include the size and form of a plot, slope of the land, the condition of the soil (Williams, 1994). All land in fact, all real estate is judged primarily on its location (Harvey, 1996).

Seven independent variables namely electricity, water service, extent of the land, drainage (sewerage), and number of bids, frontage and the bus route were considered as important to the proposed model. Influence services (locational factors) is measured by the distance in feet from the building block to each service. Therefore the estimable regression model can be written as follows.

Land value = f (diel, diwa, exte, didr, fron, dibu)

- Y = land value per perch (rupees)
- X<sub>1</sub> = diel = distance to electricity main (feet)
- X<sub>2</sub> = diwa = distance to water main (feet)
- X<sub>3</sub> = exte = extent of the land (Perches)
- X<sub>4</sub> = didr = distance to drainage main (feet)
- X<sub>5</sub> = bids = number of bids
- X<sub>6</sub> = fron = frontage to the road (feet)
- X<sub>7</sub> = dibu = distance to bus route (feet)

In order to build up a model to ascertain land values, multiple linear regression analysis was performed by using the statistical analysis system package. Based on the above concepts and the practical experience in the field of valuation, the following relationships were adopted to develop the model to ascertain land values.

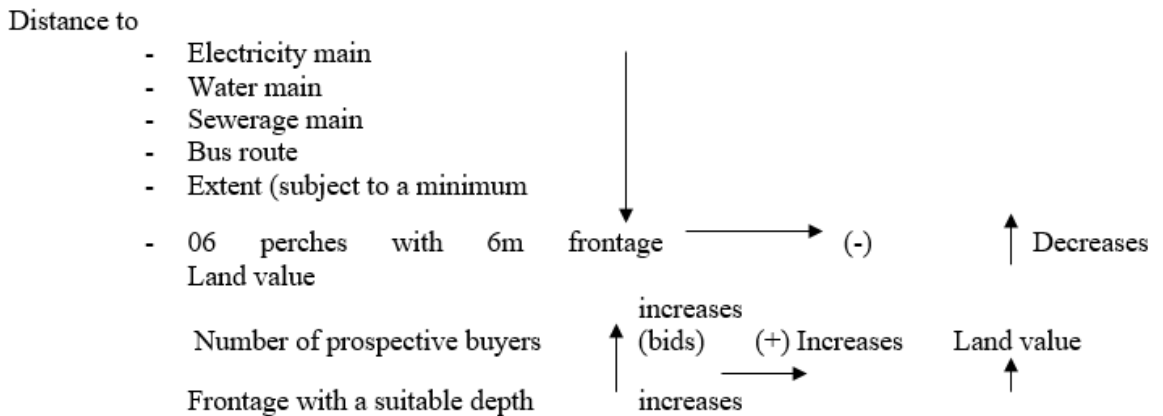


Fig 1. Land value operationalization

Every step was taken to avoid specification errors in the model. That is not to include irrelevant independent variables in to the model and also not to exclude any relevant explanatory variables from the model.

### Data Collection

The first step was to collect data on :

Residential site sale prices (including each bid) at the public auctions.  
Physical characteristics of building sites that affect selling prices, such as lot size, frontage etc.

Accessibility characteristics that affect prices such as distances to bus routes, electricity, water and sewerage mains.

Subjective valuations of individuals with respect to ceiling price, floor price and asking price.

The main character of the study area in general can be described as a mixture of medium income group older houses and high income group ultra-modern residences mixed with public buildings and non-residential uses mainly along Elvitigala Mawatha, Nawala - Narahenpita Road and Kirula Road. This is quite common in most of the residential land properties all over the country.

Face values given in Title Deeds (deed considerations) of private land transactions are often understated because of stamp duty. Hence this data are not suitable for analysis. They will be biased, inconsistent and do not reflect the market value of a land block. The data used in this study have been limited only to the land values that are determined where the open market had operated (i.e. public auctions) and thus the accuracy of land value information is assured.

Residential land value data were collected from 06 public auction sales of 86 building sites, out of which 24 sales were exceptional cases due to the additional value (scenic view) incorporated in to the market value. Hence these sales were omitted and details of sixty two residential lands sold by public auction (held on six different dates) were collected. Due to this time difference there is an error involved because then land values relate to different points of time. This was rectified by bringing all the land values as at February 1994, where it is required by adding interest for the time lapsed by comparing real land values of comparable land sales from the immediate vicinity.

### **3. Results and discussion**

The data set for building the model to ascertain land values was analysed using the statistical analysis system package, and as a first step, the data set was checked for outliers. Based on the error plots, it was found that the data are distributed randomly around the mean in the case of each independent variable, and no outliers were found. Further, the error plots were carefully examined to see whether there was a pattern of distribution in the error term. No such pattern of distribution in the error plots were found. Thus it implies that the assumption stochastic disturbance in the error term normally distributed, has not been violated. The problem of Multicollinearity was also examined by

performing a correlation matrix. It appeared that the following pairs of independent variables viz distance to drainage (sewerage) and distance to bus route, distance to electricity main and distance to water main were highly correlated. Therefore, it is suspected that there may be a problem of multicollinearity among these variables. In order to clarify this further, the condition numbers were calculated, and found that the condition numbers are well within the significant levels. Therefore, it was concluded that there is no problem of multicollinearity. Since the data set is from a cross sectional survey there can not be a serious problem of auto correlation. However, the auto correlation was checked by performing the Durbing Watson test and the results (DW = 2.02) indicated that it was not significant at a level of 5% (Kmenta 1971, Kennedy 1985).

Since steps have been taken to avoid specification error and tests have been carried out for multicollinearity presence of outliers, and violation of assumptions, the data set is suitable to apply the OLS method.

Land value per perch the dependent variable was regressed with independent variables viz. distance to electricity main, water main, sewerage main, bus routes, extent of the land, frontage and the number of competitive bidders using the statistics analysis system packaging. The estimated beta values or unknown co-efficients of the variables are given in regression equation .

$$Y = 293144 + 31.971X_1 - 69.075X_2 + 7185.931X_3 + 1927.584X_4 + 3718.793X_5 - 4.710X_6 - 2116.165X_7 \dots\dots\dots (2)$$

$$R^2 = 0.90 \quad \text{Adj - } R^2 = 0.89$$

The estimated model was significant at 0.001 level. The Adj - R<sup>2</sup> was 0.89 indicating that the number of observations and degrees of freedom adjustments were acceptable. The estimated parameters of the independent variables, distance to electricity main, distance to water main, extent and frontage were not significant. Distance to electricity and distance to (sewerage) main were positively related, while the frontage was negatively related to the value of the land. The signs of other parameters viz DIWA, EXTE, BIDS and DIBU were as expected.

The step wise procedure for dependent variable value was selected and as the first step the independent variable distance to bus route was entered. Regression results are given in equation 3.

$$Y = 441300 - 194X_7 \dots\dots\dots(3)$$

$$R^2 = 0.79$$

Bounded on condition numbers 1:1 and regression model is significant at 0.0001 level.

The estimated beta co-efficient of the independent variable distance to bus route too is highly significant, and the sign of the parameter was as expected.

As the second independent variable, distance to drainage (sewerage) was entered. Although the  $R^2$  value improved ( $R^2 = 0.86$ ) it bounds on condition number 2319.26 - 9277.06 which is not significant and the sign of the estimated parameter too was not as expected. Likewise, the independent variables distance to electricity, distance to water service and frontage were entered one by one with distance to bus route, and found that their respective signs were not as expected and even the bounds on condition numbers too were not within significant levels. Hence these independent variables viz sewerage, electricity, water service and frontage too were removed. In the city of Colombo, unlike other areas when the distance to bus route is taken all the other services, i.e. electricity, water service, sewerage facilities etc. are available within this distance. The results are agreeable with the real world situation.

Therefore the next step was to enter the independent variable bids with the distance to bus route to run the regression. The results are given in equation (4.)

$$Y = 313344 + 4788 X_5 - 139 X_7 \dots\dots\dots(4)$$

$$R^2 = 0.85$$

Regression model is significant at 0.0001 level and all the estimated parameters too were significant at 0.0001 level, and bounds on condition number 1.955, 7.821 unlike other scatter plots, the scatter plot of the independent variable the number of bids (each bid made at the auction is considered as a buyer) with the dependent variable value show a parabolic shape. Therefore the regression equation  $y = a+bx+cx^2$  was fitted to data. Hence, the independent variable bids has two beta coefficients. So as the next step (bids) was entered along with (bids)<sup>2</sup> and got the following results given in equation (5).

$$Y = 161646 + 17743 X_5 - 273 X_5^2 - 108X_7 \dots\dots\dots(5)$$

$$R^2 = 0.87$$

Regression model is significant at 0.0001 level and all the estimated parameters were highly significant and bounds on condition number; 59.127, 330.047



Last step was to enter the independent variable 'extent' into the above variables considered in the equation (5). Regression results are given in equation (6).

$$Y = 106135 + 7645X_3 + 14316X_5 - 209X_5^2 - 102X_7 \dots\dots\dots(6)$$

$$R^2 = 0.88$$

Bounds on condition number 66.87, 499.68 and the regression model was significant at 0.0001 level. But the estimated parameter of the new independent variable extent is significant at 0.0533, hence only marginally significant and further it makes the intercept significant at 0.1200 level.

The minimum extent is 8.11 perches while the maximum is 14.00 perches. Mean is 10.73 perches, and the standard deviation is 1.4943. The variation of extent is not significant to explain the relationship with value. Therefore from this model building process, it is quite apparent that the reduced model, given in equation (5) is the most appropriate model to estimate land values of residential building sites in the city of Colombo.

This confirms the Hurd's well known statement about the urban land values, "Since value depends on economic rent, and on location, and location on convenience and convenience on nearness. Therefore one may eliminate the intermediate steps and say that land value depends on nearness".

According to the reduced model given in equation (3) it can be seen that infrastructural services, physical characteristics of the land, good title etc. account for about 79% of the land value of residential building sites in the city of Colombo. The number of bids or the number of prudent purchasers account for about 8% of the land values provided that the other factors are kept constant and the number of bids or the number of prudent purchasers varies in the range of 7 to 38. And the size of the land (extent) accounts for about less than one percent of the land value. The partial R<sup>2</sup> and model R<sup>2</sup> are given in the Table 3.

**Table 3. Summary of Stepwise Procedure for Dependent Variable Value**

Step	Variable Entered/Removed	Number in	Partial R2	Model R2	Prob.> F
1	DIBU	1	0.7878	0.7878	0.0001
2	BIDS	2	0.0649	0.8526	0.0001
3	BIDS2	3	0.0162	0.8689	0.0096
4	EXTE	4	0.0084	0.8773	0.0533

Compiled by Author

Therefore based on equation (3), if the distance to bus route ( $X_7$ ) is measured (in feet), the market value per perch can be estimated. This estimate figure explains 79% of the market value. If the independent variable  $X_5$  the number of competitive bidders bidding for a residential block of land in the study area is also known market value can be estimated fairly accurately (estimated value figure will explain 87% of the market value).

At the time of determining market value, it was found,  $X_5$  equals to 17 and if 17 is substituted for  $X_5$  in to the equation 5, the most appropriate reduced model to estimate the market value of a residential block, the equation 7 can be obtained.

$$Y = 161646 + 17743(17) - 273 (17)^2 - 108X_7 \dots\dots\dots (7)$$

$$Y = 384380 - 108X_7 \dots\dots\dots(7a)$$

$$(R^2 = 0.87)$$

Thus based on the land value prediction equation 10 a, if the distance to bus route (in feet) is known, the open market value per perch can be computed.

At the interview, it was found that the floor price (minimum selling price as a last resort) is in the range of Rs. 275,000 to Rs. 300,000, a perch (mean value is Rs. 287,500). It was also found that the asking price of such a land is in the range of Rs. 400,000 to Rs. 450,000 (mean value is Rs. 425,000) per perch. The floor price and the asking price will place a limitation on possible movements in the market price on supply side.

**Estimating the floor price**

Based on the information collected at the interview and the land value prediction equation (1) floor price or the minimum selling price of a residential block of land fronting a bus route in the study area could be found by adding prospective buyers one by one, up to the point at which it accumulates the beta coefficient value of the independent variable (bids)<sup>2</sup> equal to the net beta co-efficient value corresponding to the variable bid when there is only one buyer or one bid (details in Table 4 ). Thus the floor price of a residential building site could be computed by using the equation 8.

$$\text{Floor price} = 161646 + 17743(8) - 273(8)^2 - 108(X_7) \dots\dots\dots(8)$$

(Since distance to bus route is zero, the regression co-efficient corresponding to distance to bus route too is zero).

Floor price = Rs. 286118 (Say Rs. 286,000)

**Estimating the Asking Price**

Based on the prediction equation 2, if the asking price is computed, the price of Rs. 425,000 to Rs. 438,000 per perch could be derived from 23 and 26 numbers of competitive bidders respectively, and at this point accumulated net regression co-efficient value corresponding to the variable bid is about fifteen times the estimated unit value of the variable, bids and the sample mean with respect to the variable bid too is about fifteen.

**Table: 4. Commutative Regression Co-efficient Values Corresponding to the Variable Bid**

Number of Bids	(Bids) <sup>X<sub>5</sub></sup> (Estimated Parameter)	(Bids) <sup>2</sup> (X <sub>5</sub> ) <sup>2</sup> (Estimated Parameter)	Regression Coefficient Corresponding to Bids
1	17.743	-0.273	17.47
2	35.486	-1.092	34.394
3	53.229	-2.457	50.772
4	70.972	-4.368	66.604
5	88.715	-6.825	81.89
6	106.458	-9.828	96.63
7	124.201	-13.377	110.824
8	141.944	-17.472	124.472
9	159.687	-22.113	137.574
10	177.43	-27.3	150.13
11	195.173	-33.033	162.14
12	212.916	-39.312	173.604
13	230.659	-46.137	184.522
14	248.402	-53.508	194.894
15	266.145	-61.425	204.72
16	283.888	-69.888	214.0
17	301.631	-78.897	222.734
18	319.374	-88.452	230.922
19	337.117	-98.553	238.564
20	354.86	-109.2	245.66
21	372.603	-120.393	252.21
22	390.346	-132.132	258.214
23	408.089	-144.417	263.672
24	425.832	-157.248	268.584
25	443.575	-170.625	272.95

26	461.318	-184.548	276.77
27	479.061	-190.017	289.044
28	496.804	-214.032	282.772
29	514.547	-229.593	284.954
30	532.29	-245.7	286.59
31	550.033	-262.353	287.68
32	567.776	-279.552	288.224

Compiled by Author

The asking price could be computed by using the equation (9a).

$$\text{Asking price} = 161646 + 17743(23) - 273(23)^2 - 108(X)_7 \dots\dots\dots (9)$$

$$\text{Asking price} = \text{Rs. } 425318 \text{ ( say Rs. } 425,000)$$

$$\text{Asking price} = 161646 + 17743(26) - 273(26)^2 - 108(X)_7 \dots\dots\dots (9a)$$

$$= \text{Rs. } 438416 \text{ ( say Rs. } 438,000)$$

(Since distance to bus route is zero, the regression co-efficient corresponding to distance to bus route too is zero).

Asking price may be fixed in between the two figures, and may take the mean of the two values as the asking price.

**Estimating the Maximum Ceiling price for a residential block of land.**

Based on the said land value prediction equation 1, the highest ceiling price for each building site, according to its location could be computed as at Table 6. The highest ceiling price is achieved when the number of competitive bidders or prospective purchasers increased to 32. Thus the highest ceiling price could be computed by using the equation 6 (substitution 32 for X<sub>5</sub>)

$$\text{Maximum ceiling price} = 161646 + 17743(32) - 273(32)^2 - 108X_7 \dots\dots\dots (10)$$

$$\text{Maximum ceiling price} = \text{Rs. } 449,870 \text{ (say Rs. } 450,000)$$

**Determination of Land Price**

With the help of these equations, useful and valuable parameters could be ascertained and these estimated figures will be very helpful in the determination of land prices, in the study area. The ascertained parameters for land price determination in the study area are given in Table 5. As per Table 5 a good quality residential land fronting the bus route and falling within the residential area will have a floor price of Rs. 286,000 per perch, and the asking price of Rs. 430,000 per perch, while the highest ceiling price is Rs. 450,000 per perch. Based on equation 1 following ceiling prices could be computed as per given in Table 6.

**Table: 5 Ascertained Parameters for Land Price Determination in the Study Areas**

Location	Floor Price per perch (Rs)	Asking Price (Rs) per Perch	Maximum Ceiling Price (Rs) per perch
Fronting a bus route and within Residential Zone	286000	430000	450000
100 feet away from bus route	275000	419000	439000
200 feet away from bus route	264000	408000	428000
300 feet away from bus route	254000	398000	417000
400 feet away from bus route	243000	387000	406000
500 feet away from bus route	232000	376000	396000
600 feet away from bus route	221000	365000	385000
700 feet away form bus route	210000	354000	374000
800 feet away from bus route	200000	344000	363000
900 feet away from bus route	189000	333000	353000
1000 feet away from bus route	178000	322000	342000
1100 feet away from bus route	167000	311000	331000
1200 feet away from bus route	156000	300000	320000
1300 feet away from bus route	146000	290000	309000
1400 feet away from bus route	135000	279000	299000
1500 feet away from bus route	124000	268000	288000
1600 feet away from bus route	113000	257000	277000
1700 feet away from bus route	102000	246000	266000
1800 feet away from bus route	92000	236000	255000

Compiled by Author

**Table: 6 Computations of Ceiling Prices**

Number of Prospective Buyers	Ceiling Prices Based on Subjective Valuations (Rs)
1	180,000/=
2	196,000/=
3	212,000/=
4	228,000/=
5	244,000/=

6	258,000/=
7	272,000/=
8	286,000/=
9	299,000/=
10	312,000/=
11	324,000/=
12	335,000/=
13	346,000/=
14	357,000/=
15	366,000/=
16	376,000/=
17	384,000/=
18	393,000/=
19	400,000/=
20	407,000/=
21	414,000/=
22	420,000/=
23	425,000/=
24	430,000/=
25	435,000/=
26	438,000/=

Since no seller is prepared to sell at a price less than Rs. 286,000 per perch, no sale will take place at the ceiling prices from Rs. 180,000 to 272,000. These data could be tabulated as shown in Table 7 to derive market value. Market price is determined at the equilibrium point where the number of sellers and their floor prices are equal to the number of buyers and their ceiling prices. (Lean and Goodall, 1967). According to Table No. 7 ten sellers are willing to sell at Rs. 384,000 per perch, and ten buyers are willing to buy at this price. Therefore, the open market land price is determined at Rs. 384,000 per perch. This could also be found with the help of a graph, if the prices are plotted on the Y axis and the number of buyers and sellers on axis 'X' the point at which the demand curve crosses the supply curve will give the open market price (see fig. 2 for the graph). The open market price of Rs. 384,000 per perch is derived when 17 prospective buyers compete for a block of residential land. Therefore at the time of determining market value,  $X_5$  equals to 17 and if 17 is substituted for  $X_5$  in to the equation 1; the most appropriate reduced model to estimate the market value of a residential block, the equation 7 can be obtained.

$$Y = 161646 + 17743(17) - 273 (17)^2 - 108X_7 \dots\dots\dots (7)$$

$$Y = \text{Rs. } 384380 - 108(X_7) \dots\dots\dots (7a)$$

Thus based on the equation 7 if the distance to bus route (in feet) is known, the open market value per perch could be computed.

**4. Conclusion**

This study shows that the market price of land is determined at the equilibrium point where the number of sellers (10) and their floor prices (Rs. 384,000) are equal to the number of buyers (10) and their ceiling prices (Rs. 384,000). This study acknowledges and further strengthened that the point at which demand curve crosses the supply curve gives the open market price in competitive land market.

Market value of a property is simply the price at which a property will sell within a reasonable period of time. On average reasonable period of time means 45 to 90 days depending on property liquidity.

**Table: 7 Matching the Number of Buyers and Sellers With Their Respective Prices to Determine Open Market Price**

Ceiling Price (Rs)	Number of Buyers	Floor Prices (Rs)	Number of Sellers
272000	20	-	0
286000	19	286000	1
299000	18	299000	2
312000	17	312000	3
324000	16	324000	4
335000	15	335000	5
346000	14	346000	6
357000	13	357000	7
366000	12	366000	8
376000	11	376000	9
384000	10	384000	10
393000	9	393000	11
400000	8	400000	12
407000	7	407000	13
414000	6	414000	14
420000	5	420000	15
425000	4	425000	16
430000	3	430000	17

435000	2	435000	18
438000	1	438000	19
-	0	442000	20



## References

- Alonso, W. (1964) Location and Land use : Toward a General Theory of Land Rent , Harvard University Press, Cambridge, USA.
- CMC (Colombo Municipal Council) (1988) "Report on the Survey of Squatter Settlements in the City of Colombo"
- Folke, D., (1987) Land Economics, PWS Publishers, USA
- Hurd, R. (1903) Principles of City Land Values, The Record and Guide, New York, NY, USA.
- Kennedy, P., (1985) A Guide to Econometrics, MIT Press
- Kmenta, J., (1971) Elements in Econometrics, Mc Millan, New York.
- Lean, W. and Goodall, B., (1966) Aspects of Land Economics, the Estate Gazette limited, London (P.364)
- Linchfield, N., (1975) The Economics of Planned Development, TheEstate Gazette limited , London (P.364).



- Premathilaka, H.M., (1998) An Analysis on Rural Agricultural and Urban Land Markets, M.Phil thesis (Unpublished) university of Peradeniya.
- Appraisal Institute (2001) The Appraisal of Real Estate, 12e, The Appraisal Institute, Chicago, USA.
- The Appraisal of Real Estate (1992) Tenth Edition, Appraisal Institute, Chicago (PP 2 - 30).
- UDA (Urban Development Authority) (1998) Colombo Metropolitan Regional Structure Plan - Land Use Survey 1996, City of Colombo Volume VI.
- Williams, R.H., (1994) Urban Land and Property Market in the United Kingdom UCL Press Limited, University College, London.
- Millington, A.F.(2000) An Introduction to Property Valuation, Fifth edition, 711, Third Avenue, New York, NY 10017, USA
- David Issac, and John O'Leavy, (2012) Property Valuation Principles Second edition, Palgrave, Macmillan
- Peter Wyatt (2013), Property Valuation, second edition, John Wiley and Sons Ltd. The Atrium, Southern gate West Sussex, PO1985Q, United Kingdom.

## **The Regulatory Implication on Property Values**

**G W G Abeygunawardene<sup>1</sup>**

<sup>1</sup>Director, Property Portfolio Management, Recoveries & Facility Management,  
Urban Development Authority  
[gwgabey@yahoo.com](mailto:gwgabey@yahoo.com)

### **1. Introduction**

The study has been focused to explain the basic legal background relate to Real Property highlighting the various regulatory ends through few case studies. Understanding basic laws practicing in Sri Lanka and accepted customary laws have been explained in the next stage.

The legal interest towards the real property has then been briefed.

It has further highlighted a few case studies realizing the applicability of various laws to those projects which are currently progressing in the City.

### **Definitions of Property & Real Estate**

*What does real property mean ?*

**According to the RICS Valuation Professional Standards, January 2014**

Real Property contains all rights, interests and benefits related to the ownership of real estate, including an negative rights, interests or benefits (ie obligations, encumbrances or liabilities relating to the interest being valued.

#### **Real Estate**

***According to the RICS Valuation Professional Standards, January 2014,***

“Land and all things that are a natural part of the land (e.g. trees, minerals) and things that have been attached to the land (e.g. building and site improvements ) and all permanent building attachments (e. g. mechanical and electrical plant providing services to a building) that are both below and above the ground”.

## **Legal Background in relate to the Property**

### ***Under Roman Dutch Law – the concept of land is much wider***

Land means the soil, anything permanently attached to the soil , anything fastened to things that are permanently attached to the soil, air space above the soil and earth below the soil up to the centre of earth.

Roman Dutch Law was applied in the Netherlands in the 17<sup>th</sup> , 18<sup>th</sup> Centuries, and it is variety of European Continental Civil Law in the beginning of 19<sup>th</sup> century the Roman Dutch Law was superseded by the Napoleonic Code Law in Netherlands but still applied by the courts of South Africa (and neighboring Lesotho Swaziland, Namibia, Botswana and Zimbabwe) Guyana, Indonesia, Easttomow and Sri Lanka. It was largely drawn upon by Scots Law.

### ***Customary Law relate to the Property in Sri Lanka***

There are three customary laws which are currently operating in Sri Lanka

Thesawalamai

Kandyan

Muslim

All these customary laws operate strictly within limited parameters.

### ***Thesawalamai***

**"Thesawalamai"** in Tamil, literally mean the customs of the land . It is ancient in its and has prevailed in the north Sri Lanka for several centuries – long before the evolution of any political parties or liberation of movements. Because of its popularity among the local inhabitants, the Dutch first codified it in 1706 and the British gave it legal validity by Tesawala Regulation No. 18 of 1806. Ordinance No. 5 of 1869 Thesawalamai has gradually been developed over a hundred years by our judges.

Thesawalamai , in its origin was intended to serve an agricultural community

Thesawalami is applicable to all lands situated in the Northern Province whether such lands is owned by Sinhalese , Tamil, Muslims or Burger.

### ***Kandyan Law***

Similar to Thesawalamai, Kandyan Law was established by colonial era due to its inherited features. British while practicing Roman Dutch Law accepted Kandyan Law in to judicial system.

An ordinance now exist of No. 25 of 1944 and mainly emphasis on transfer of property and marriages.

Special reference are given to

Transfer of Property and  
Inheritance - Immoveable Property.

### ***Sharia Law***

Sharia Law is body of Islamic Law. The terms means “Way” or “path” it is legal framework within which public and some private aspects of life are regulated for those living in the legal system based on Islamic.

Sharia deals with all aspects of day to day life including politics , economic , banking , business law content law sexuality and social issues.

It is not a strictly codified uniform set of laws that can be called Sharia. It is more like system of several laws based on qur.na, Hedith and centuries of debate interpretations and precedent.

### **Legal interest of the property**

#### ***Freehold***

A freehold ( Called Frank – tenement and franktenement) is ownership of real property, being a land and all immovable structures attached to the such lands. Immoveable property includes land and all that naturally goes with it such as buildings, trees or under grounds resources.

It is normally originate from inheritance or otherwise (such transfer, purchasing, gifts).

Ownership of it must be of an indeterminate duration.

#### ***Leasehold***

This is oppose to a free hold in which property reverts to the owner of the land after the lease period expired.

In real estate which is the subject lease (written agreements for an extended period of time) . The term is commonly used to described improvements on real property when the improvements are built on land owned by one party which lease for a long term (such as 99,50 years). Lease period would be decided by the basically on the statues of property .

***Servitude / easements***

A right of by which something owned by one person is subject to a specified use or enjoyment by another.

***Life interest***

A life interest is some form of right, usually under trust, which lasts only for the life time of the person benefiting from the right. A person with the life interest is known as a life tenant. A life interest ends when the life tenant dies.

A document creates for this and terms of benefits depend on the condition of the documents.

***Mortgage***

A legal agreement that conveys the conditional right of ownership on assets or property by its owner to a lender as a security for a loan. Virtually on legally owned property can be mortgage.

A debt instrument secured by the collateral of specified real estate property , that the borrower is obliged to pay back with a predetermined set of payments.

***Licenses***

A permit from an authority to own or use something , do a particular thing or carry on a trade permit, certificate, documents, authorization, warrant.

***Time share***

The arrangements where by several joint owners have the right to use a property as a vacation home under time – sharing agreement.

***Monthly Tenancies***

Depending on the status of the space monthly tenancies are arranged by the owners of the properties.

**2.Regulatory Frame Work**

Having going through the origination of legal system in Sri Lanka it now discussed the regulatory back ground towards the real property.

***a. Enactments***

The laws that is passed depending on the fields of subjects called Enactments. These Enactments in time to time be revised addressing its shortcomings. The Enactments those mainly affected to the real property are now listed down and explain there basic objectives as follows.

***Town and Country Planning Ordinance and its amendments***

AN ORDINANCE to authorize the formulation and implementation of a National Physical Planning policy; the making and implementation of a National Physical Plan with the object of promoting and regulating integrated planning of economic, social, physical and environmental aspects of land in Sri Lanka; to provide for the protection of natural amenities, the conservation of natural environment, buildings of architectural and historic interest and places of natural beauty; to facilitate the acquisition of land for the purpose of giving effect to such plan and to provide for matters incidental to or connected with the matters aforesaid.

***Land Development Ordinance/Act***

An Ordinance to provide for the Systematic Development and Alienation of Crown Land in Sri Lanka.

***The Coast Conservation and Coastal Resource Management Act No. 49 of 2011***

AN ACT to make provision for a survey of the coastal zone and the preparation of a coastal zone management plan; to regulate and control development activities within the coastal zone; to make provision for the formulation and execution of schemes of work for Coast Conservation and Coastal Resource Management within the coastal zone; to make consequential amendments to certain written laws; and to provide for matters connected therewith or incidental thereto.

***A vegetation line is maintained. 300m Inland, 2Km towards Sea, Upto 2Km towards Inland for any water Bodies, 100m reservation comes under CCD.***

***Mahaweli Development Authority Act (23 of 1979)***

An Act to establish the Mahaweli Authority of Sri Lanka which shall be the authority responsible for the implementation of the Mahaweli Ganga Development Scheme, to provide for the establishment of Corporations to assist in such implementation and to provide for matters connected therewith incidental thereto

***Declaration of Special Area******Irrigation Ordinance***

Reservation for river and water bodies depending on the size of them

***Board of Investment of Act No. 4 of 1978***

Concessions and facilities depending on the investment. Alienation of lands on Special Concessions .

***Urban Development Authority Law No. 41 of 1978***

A law to provide for the establishment of an Integrated planning and implementing of Economic, Social & physical development of certain areas as may be declared by the minister to be Urban Development Areas and for matters connected therewith or Incidental thereto.

***Ceiling on Housing Property Act No 56 of 1980***

A law to regulate the ownership size and cost of construction of houses and to provide for matters incidental thereto or connected therewith.

***Sri Lanka Disaster Management Act No 13 of 2005***

An act to provide for the establishment of the national council for disaster management; the disaster management Centre; the appointment of technical advisory committees; the preparation of disaster management plans; the Declaration of a state of disaster; the award of compensation and for matters connected therewith or incidental thereto.

***Sri Lanka Land Reclamation and Development Corporation Act, No. 15 of 1968***

“An act to provide for the establishment of a corporation, to be known as the Sri Lanka Land Reclamation and Development Corporation for the development and reclamation in accordance with the national policy relating to land Reclamation and Development of such areas as may be declared by order of the minister ; For such corporation to undertake construction work and consultancy Assignments in the field of engineering; and for matters connected therewith or Incidental thereto.”

***Temple Lands (Compensation) Ordinance***

An ordinance to make provision for the payment to the Public Trustee of moneys payable as compensation under the Land Acquisition Act in respect of lands belonging to Temples; for the application of such moneys to certain purposes; and for matters connected therewith or incidental thereto

***Central Environmental Authority Act No 47 of 1980***

An act to establish a central environmental authority to make provision with respect to the powers, functions and duties of that authority, and to make provision for the protection and management of the

environment and for matters connected therewith or incidental thereto

***Apartment Ownership Act (No. 11 of 1973)***

A law to provide for the registration of multistoried properties, the division thereof into independent units with common elements appurtenant thereto, to enable the separate ownership of, and disposition of titles to, such units, to repeal the condominium property act, no. 12 of 1970, and to provide for matters connected therewith or incidental thereto. clued the acts in the presentation

***Land (Restriction on Alienation) Act, No 38 of 2014***

Act make provisions to stipulate Restriction on the Alienation of Lands in Sri Lanka.

***Tea & Rubber Estates (Control of fragmentation Amendment Act – 20 of 2005***

(Tea Estate 20 ha. Rubber – 20 ha coconut 4 ha, are prohibited without approval)

***Paddy Land Act***

An Act to Provide Security of Tenure to Tenant Cultivators of Paddy Lands ; to Specify the rent payable by Tenant cultivators to land Lords.

***Agricultural Lands Act (No. 42 of 1973)***

A law to provide security of tenure to tenant cultivators of paddy lands; to specify the rent payable by tenant cultivators to landlords; to make provision for the establishment of cultivation committees: to specify the powers and duties of such committees; to provide for the determination of tenurial and other disputes in respect of agricultural lands by agricultural tribunals; to provide for the repeal of the paddy lands act, no. 1 of 1958; and to provide for matters connected therewith or incidental thereto.

***Agrarian Development Act – 46 of 2000***

An act to provide for, matters relating to landlords and tenant cultivators of paddy lands, for the Utilization of agricultural lands in accordance with agricultural policies ; for the establishment of Agrarian development councils, to provide for the establishment of a land bank ; to provide the establishment of agrarian tribunals, to provide for the repeal of the agrarian service act no 58 of 1979 and for matters connected therewith or incidental thereto.



***Land Reform Law No. 1 of 1972***

A law to establish a land reform commission to fix a ceiling on the extent of agricultural land that may be owned by person, to provide for the vesting of lands owned in excess of such ceiling in the land reform commission and for such land to be held by the former owners on a statutory lease from the commission to prescribe the purpose and the manner of disposition by the commission of agricultural lands vested in the commission so as to increase productivity and employment to provide for the payment of compensation to persons deprived of their lands under this law and for matters connected therewith or incidental thereto.

***Civil Aviation Act No 14 of 2010***

An act to make provision for the Regulation, Control and matters related to Civil Aviation to give Effect to the convention on international civil aviation.

***National Thoroughfares Act No. 40 of 2008***

To provide for the planning, design, construction, development, maintenance and administration of an integrated public road network in Sri Lanka; to provide the legal framework necessary to facilitate private sector investment and participation in road construction, development and Maintenance; to assist the Provincial Councils and local authorities in the development and maintenance of roads; to promote and facilitate community based organizations engaging in the construction, maintenance and management of roads and public roads; and to provide for matters connected therewith or incidental thereto.

***Land Reform Law No. 1 of 1972***

A law to establish a land reform commission to fix a ceiling on the extent of agricultural land that may be owned by person, to provide for the vesting of lands owned in excess of such ceiling in the land reform commission and for such land to be held by the former owners on a statutory lease from the commission to prescribe the purpose and the manner of disposition by the commission of agricultural lands vested in the commission so as to increase productivity and employment to provide for the payment of compensation to persons deprived of their lands under this law and for matters connected therewith or incidental thereto.

***Rent Act No. 7 of 1972***

The Rent Restriction Ordinance of 1942 was one of the major welfare legislation enacted in Sri Lanka during the colonial rule with a view to provide a measure of relief to the house tenants. Thereafter, a more elaborated law was passed by parliament in independent Sri Lanka by way of

Rent Restriction Act No. 1948 However, even with this law in operation, there was still room left for landlords and harass their tenants, thus calling for enhanced protection for tenants. It was to fill this lacuna that the Rent Act No. 7 was passed in parliament in 1972.

***Local Authorities Act***

**MC Ordinance No 29 of 1947 Chapter 252 – Part IV**

- Sec. 35 - lands vested in Municipal Councils**
- Sec. 36 - methods of granting administrative of such lands**
- Sec- 37 - Other property vested in Municipal Councils**

**UC Ordinance – Chapter 255 - Part**

- Sec. 32 - lands vested in Municipal Councils**
- Sec. 33 - methods of granting administrative of such lands**
- Sec- 34 - Other property vested in Municipal Councils**

***Pradeshya Sabha Act No. 15 of 1987***

Similar provisions are made with regard to the real property lately introduced by this Act

***Gazettes Notifications***

In addition to the enactments, the government publish gazette notifications initiated by various Government organizations depending on their relevant fields.

Eg. - Urban Development Authority - Planning and Building Regulations, Central Environmental Authority - Special area regulations Sri Lanka Land Reclamation & Development Corporation - Water Bodies of low-lying area reservation Irrigation Department - Major river, reservoirs,

***Government policies***

In time to time government declare various policies either through cabinet decisions or special gazette notifications. Annually budget proposals also make some policies towards real property.

The above regulatory implications affects the property values on its

Physical development and

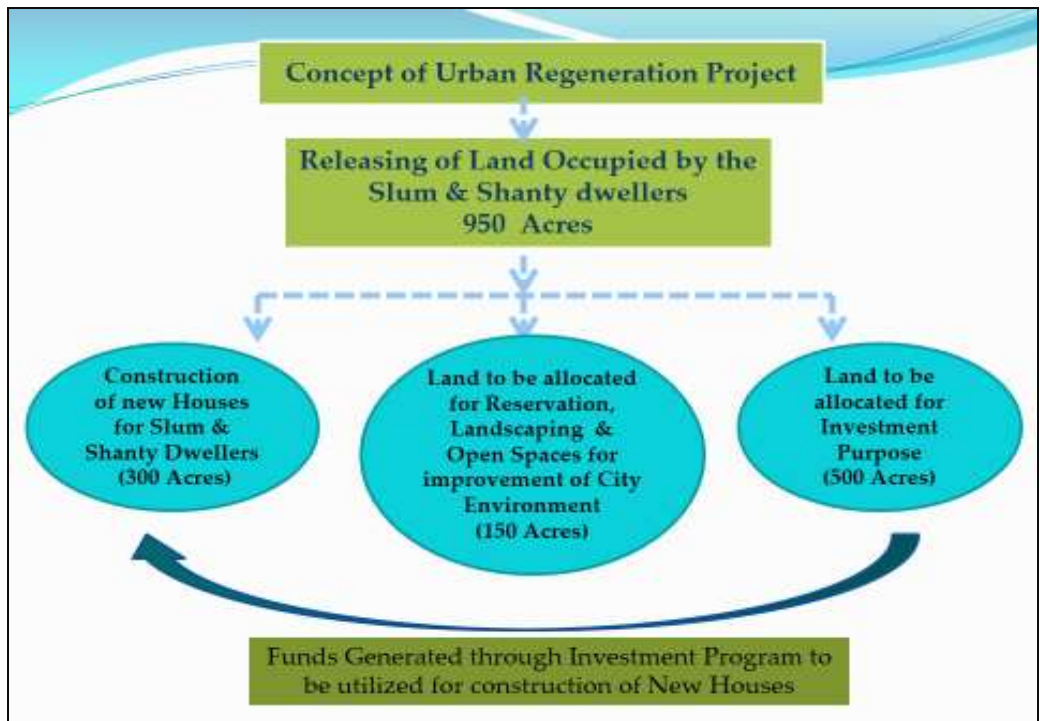
Ownership of the property

**Urban Regeneration Program of the City of Colombo**

The estimated average rate of urbanization in the country during the period 2010 to 2020 would be in the range of 3% to 4% per annum, while the country's annual population growth rate will be less than 1.2%.

These trends suggest that around 60% of the population would be living in urban areas by 2020. With this trend, it is envisaged that the City of Colombo will continue to grow as the prime Commercial Capital of Sri Lanka demanding gradual shift of its administrative boundaries towards the hinterlands. The present government's policy has correctly recognized these development trends and strengthened the institutional frame work which directly involved.

**The Concept of the Present Urban Regeneration Project**



Source: URP Division, Urban Development Authority

### ***Western Region Megapolis Project***

The new government of Sri Lanka has revealed its stance on a western region megapolis enveloping Colombo, Gampaha and Kalutara Districts on a recent Cabinet Approval. The idea is to update the Master Plan originally initiated over a decade ago.

### ***Characteristics of Real Estate Market***

The Major assets sectors of Real Estate Market in Sri Lanka.

Commercial

Residential

Retail,

Hospitality

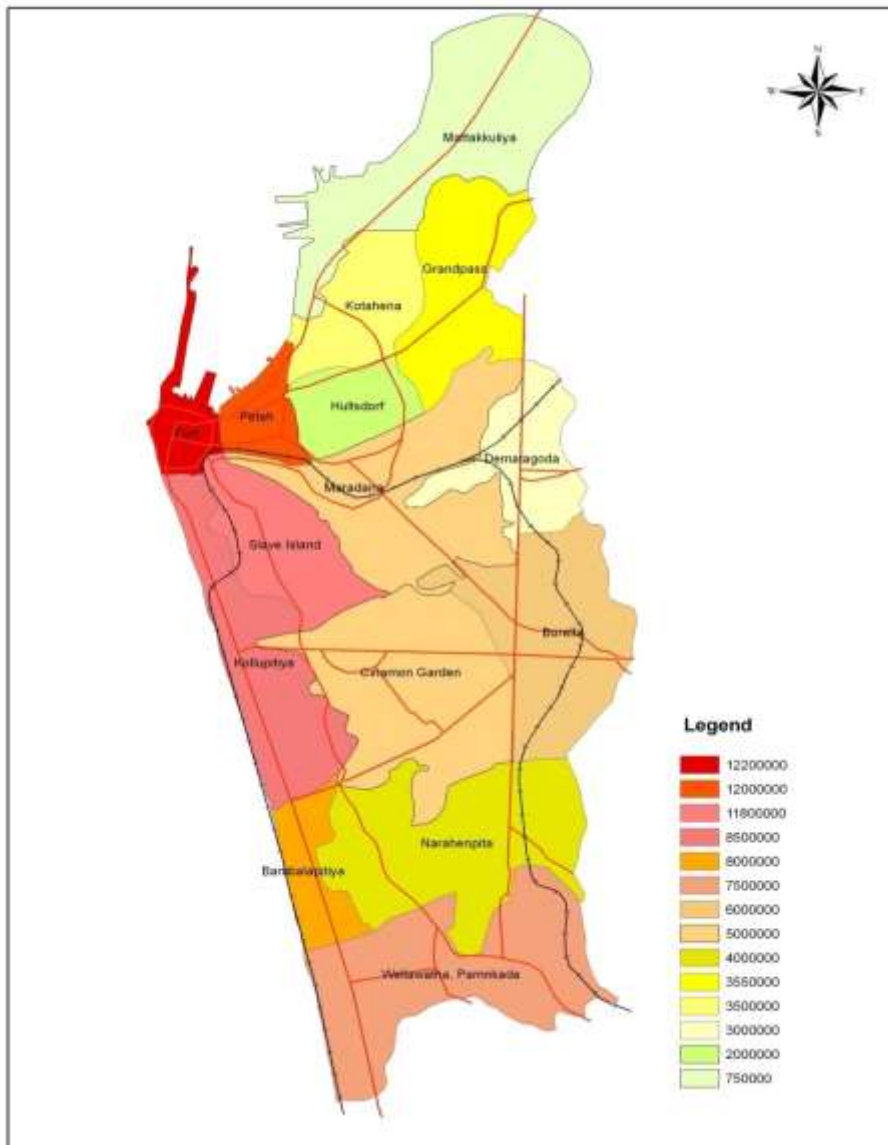
Leisure /entertainments assets.

Sri Lanka is now enjoying the freedom of democratic life stage since the prolonged war came to an end about 6 years ago.

Since civil war ceased, expectations of the many economic and commercial sectors have been heightened and the political pressure was also increased as such the government was compelled to initiate many re-constructions and development projects to meet the needs of war affected people of the island. The government strategy is now becoming evident that while it is handling all the infrastructure development works in commercially viable projects are left to the private sector investors and developers. This strategy of the government necessitated foreign investment in major projects and hence investment friendly administrative and management procedures have been enforced.

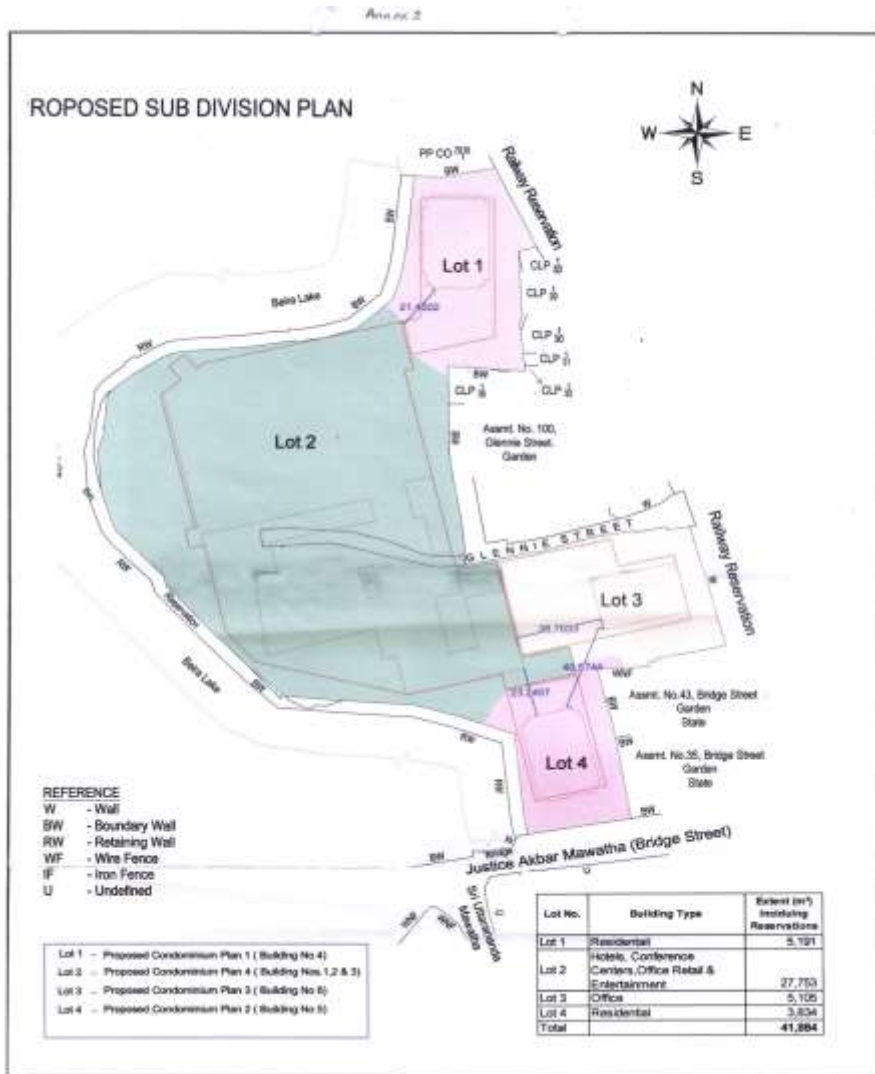
This change the overall economic and investment outlook of the government brought about a tremendous impact on the real estate market specially in the City of Colombo and suburbs.

### Behavior of the land values in Real Estate Market in the City of Colombo Case Studies Waterfront Project



Source : Market Values of the Lands - City of Colombo, 2014

Waterfront Development Project is initiated within the CBD area of the



City of Colombo.

The land comes under this project has different titles such as private, crown and Local Authority. In addition reservations on railway line, water body and road reservation and also diversion of public road involved.

### **"Delkanda Condo" Development Project**

The project comprises 22 Levels (G+21 Levels) Apartment Complex including **Swimming Pool, Commercial area, parking bays** and **270 residential units** in a land purchased by M/s QS Assets Management (Pvt) Ltd. in extent **1A - 2R - 20.20P (0.65805 hectare)** basically facing to the High Level Road just after the Delkanda Junction towards the Maharagama on the right side of the road. The basic designs have been completed based on the planning clearance issued by the Urban Development Authority on 26.03.2015 and proposed to complete within three years starting from September 2015. Financial inputs have been arranged through the local and international banks mortgaging the existing land owned by the company as mentioned above.

### **Bentota Hotel Development**

The site situated in between Bentota river and the sea. The narrow strip of land meant for hotel activities has very lucrative advantageous due to its locational conditions. However there is a reservation for Bentota river and the coastal site under Coast Conservation Act. Due to this regulation site can develop at a minimum plot coverage and there is a height restriction due to its locational background.

In contrast land value of the area is very high although there are various restrictions.

### **5. Conclusion**

It has been studied the legal framework practicing in Sri Lanka with the different customary laws in relate to the property. The properties can be located in rural or an urban locality which affect deferent legal implications and whereas its value can be varied depending on such legal implications, the use and the locational status of the property.

In addition, the determination of the value of the property depend on

Knowledge

Experience

Competency of the valuer assigned the task of valuation.

Those who are practicing as a Real Estate Professional must study the market behaviours with reference to the relevant regulatory connectivity towards the subject properties to be valued/ assessed other than the ownership of the real properties.

**References :**

- Abeygunawardene G W G, “Market Values of the Lands - City of Colombo”, 2014
- Neelkandan & Neelakandan Celebrating 50 years of Trust & Integrity [www.neelkandan.lk](http://www.neelkandan.lk)
- [www.infolanka.com](http://www.infolanka.com)
- [www.lawnet.lk.webstatsdomain.org](http://www.lawnet.lk.webstatsdomain.org)
- [www.srilankalaw.lk](http://www.srilankalaw.lk)



## **A Study on Compensation under Compulsory Purchase and suggest more Reasonable Method in terms of Law of Equity**

**J N Hettiarachchi <sup>1</sup>**

<sup>1</sup>Senior Lecturer, Department of Estate Management and Valuation  
University of Sri Jayewardenepura  
Sri Lanka

[hettiarachchjn@gmail.com](mailto:hettiarachchjn@gmail.com)

### **I. Introduction**

#### **Unjust Enrichment**

Unjust enrichment is a legal term in equity denoting a particular causative event in which one party is unjustly enriched at the expense of another and an obligation to make restitution arises regardless of ability for doing.(encyclopedia)

Another definition will be “a benefit by mistake or chance morally or ethically the one who gains the benefit that he or she has not paid or worked for, should not keep it to the rightful owner’s determinant. (encyclopedia) uslegal.com/u/unjust-enrichment/. “The party that receives money, service or property should have been delivered to or belonged to another must make restitution to the rightful owner. “Unjust enrichment is unjust they lack of legal is controversial” ‘Law of unjust enrichment’ Smith S.A.(2009) - Oxford scholarship.

Damage or loss is considered as hedge against the unjust enrichment (Guest 1982).

Compensation is also defined as remedy for unjust enrichment,which refers to the sum of money payable to a person to make up for loss or inconvenience and sum of money payable over and above the actual damage as compensation for injured feeling. Watson V Murry (1955), Paul, A Callam PLC (2012). (Calamlaw .Com/blog/legal – updates/unjust enrichment)

In spite of the existence of well established composition of neighborhood principle, many acts of one person of the society unjustly affect another in the society. Any breach of neighborhood principle and the duty of care give rise to losses to one party and invariably gains to the other party. However the law committed as it, to the resolutions of conflicting interests is directed towards maintaining a balance between losses and gains which flows from the legal concept that no one should be unjustly enriched at the expense of

another. Peiris (1992) & (Gunaratna, 2008), Hurd, A. (1999). Elements of enrichment have been considered in general work on Roman Dutch Law (RDL) and South African Law. However a valuable survey of law of enrichment is a comprehensive literature made by Wouter de Vos published in Cape Town in the year of 1958. Some early work on the subject has been carried out by D. G. John (South Africa), but it is not much descriptive when compared to the literature of de Vos. However this is a good contribution to the law of Unjust Enrichment.

The conclusion of the study of de Vos based on the assumption relating to the availability of general enrichment action in modern RDL. General enrichment action is available in situation where the enforcement of such enrichment is not provided by the law. (Peris, 2006)

The analysis of enrichment in RDL is formed by de Vos was originally confined to South African materials. However examination of modern law of enrichment and compensation show there has been many developments to the concept stemming from classical law. (Peris, 2006). Current development of concepts of damage and compensation based on the law of Delict. Delictual liabilities are being compensated at different levels and majority of affected parties are not satisfied under system of compensation. (Hettiarachchi, 2005).

Term compensation is something given to compensate for loss, suffering or injury which implies that no one in the society should be unjustly affected by an act of another person in the society (Hettiarachchi, 2009). In other words as a result of payment of compensation the person who suffered should be brought back to the position where he was before such suffering. (Peiris, 1972).

Compensation is also defined as a solution, which refers to the sum of money payable to a person to make up for loss or inconvenience and sum of money payable over and above the actual damage as compensation for injured feeling. *Watson V Murry* (1955), *Paul, A Callam PLC* (2012). *Calamlaw .Com/blog/legal – updates/unjust enrichment.*

The courts are reluctant to a certain extent to accept the equity principles over the existing law (Prematilake, 2002), however in a celebrated judicial decision courts have endorsed that they could initiate new equitable principles to the interest of the society *Errington V Errington*, (1952). In other words “equity will not suffer a wrong to be without remedy” (Hudson, 1999). Equality is the implementation of which is considered to be the

primary aim of law as solution to the conflicts in the society. Maitland F.W. Equity 2<sup>nd</sup> Ed. 1936.

Legal term equity represents the attempt to meet the problem which confronts by the society, in developing the legal concepts without endangering legal rights of the individuals Nell(1982)Principles of Equity 28<sup>th</sup> Ed. P.5.(1936)

Unjust enrichment plays an important role in determining the damage and compensation in a particular situation. This is because the unjust enrichments are unjust as they lack legal justice. Chambers, R & Charies, M. (2006).en.wikipedia.org/wik/unjust enrichment.

A general equitable principle is that a person should not profit at the expense of another and therefore should make restitutions for the reasonable value of any property, service or other benefit, that have been unfairly received and retained(en.Wikipendia.org/wiki/unjust-enrichment).

Unjust enrichment is an equitable doctrine that allows recovery when a party has unjustly retained money benefit which in justice and equity belongs to another (Paul (2001). Mc Creary V Shields (1952).

In Morris Pump V Centreline (2006) two elements have been identified for claim against the party unjustly enriched.

Receipt of the benefit by the defendant from plaintiff.  
Inequity resulting to the plaintiff because of retention such benefits by the defendant.

When the affected party can establish above elements he may succeed for the claim.

It is the utmost duty of each individual and the society at large to stick to the principle, stemming from the Law of Equity and the Law of Natural Justice that says “No one should be unjustly enriched at the expense of another” (Hettiarachchi, 2005). Similarly no one should be suffered a loss due to unjust or negligent acts of another party in the society. Bottomley V Bannister (1932).On the other hand religious preaching strictly adhere to this principle in eternal terms with the intention of leading the human being in the correct path towards well being of the society.

In fact the remedy for unjust enrichment causing loss to other party is called damage or compensation. Under equity the damage should not be to enrich

but to compensate. This view has been accepted in *Eleg V Bedfore* (1971). This is one of the concepts that has to be observed in this paper.

*Henchsburg AJ in Mannagee V Akoo*(1947) expressed that prima facie unjust between man and man require that one party should not be enriched an the expence of another.

### **Statutory Acquisitions**

As per United Nations guidelines a person who is dispossessed should be restored to his former position where he was before such acquisition. Further in theory of Equalance interpreted in *Livingstone V Railways Coal Co.*(1990) as follows.”In setting a sum of money to be given for reparation of damages you should as nearly as possible to get at the sum which will put the party who transformed into the same position as he would have been in, if he had not sustained the wrong for which he is now gaining compensation.” In a nut shell in a situation where a party is dispossessed, the victim should be compensated to the nearest loss he incurred as a result of such take over. State is empowered itself under statutes passed by the legislature, to acquire any land for public purpose (which is not specifically stated in the Act) under section 38(a) of Land Acquisition Act No. 9 of 1950.

Owner’s consent is ignorant, in the event of acquisitions by state and the computation of compensation in done under the provisions of the Act. (*Stand*, 1971).

There are arguments among scholars and professionals that present provisions in the Act, such as entity principle (*Mc Colombo V Letchman Chetty*) (1946) and injurious affection that do not fully compensate the real value of property lost by the owner. (*Gunaratne*, 2008).

It is observed that at present different methods of calculation of compensation is being practiced for the lands acquired under Land Acquisition Act.

- (a) Calculations clearly based on the provisions of the Act.
  - (b) Calculations based on the statute by which the land was acquired. Ex : UDA Act.41 of 1978 and Mahaweli Authority Act 23 of 1979.
  - (c) Additional allowances paid on the payments calculated under the Land Acquisition Act (LARC)
  - (d) Regulations recently passed by the legislation.
- Inconsistency of computation has worsened the unrest of the persons whose lands were acquired.

If an argument arises as to whether unjust enrichments and unpaid damages exist in the operation of the Act; such issues should be addressed in the proposed study.

Social unrest, the burden on the owners of lands acquired under the Act, are subject to discussion in the research to bring about reasonable solution for the problem of computation of market value (Section 45), injurious affection and betterment (Jonker, 1984) and deprivation of claimant's interest. (Jonker,1984)

### **Identification of Problem**

It is evident that the society comprised of different people of different ideologies who act in different manner resulting different outcomes. Many acts of people both intentionally or without intention have some effect on other members of the society or the properties whether public or private. May be public or private acts make losses to others in terms of money, by way of actus reus and mens rea. Perhaps these damages may be negligible or ignorant due to unavailability of prompt action under law or by tradition.

Polluted air and smoke from a factory will be detrimental to the peaceful living of surrounding society. However such smoke cannot be fully abated, or restricted due to necessity of sustainability of the economy of the country.

This has created problematic area in damages and compensation, because the government has to maintain the balance between social costs and social benefits. Statutes specially are being used to restrict the full ownership (untendi, frutendy, abutendi Roman Law) and the state may acquire immovable property under Land Acquisition Act of 1950 and payment of compensation should be in accordance with the provisions in the statutes. Do they equitably compensate the owner of acquired property and the society very often disagree with such compensations. Society today questions as to why they are not fully compensated on equity principles, when law is for the justice of the society.

**General Objective :**

A Study on losses and unjust enrichments to the owner and the state in terms of compulsory purchase.

**Specific Objectives :**

- (a) To identify the current losses and unjust enrichments as a result of compulsory acquisition of property under Land Acquisition Act.No 9 of 1950.
- (b) To identify the current methods of assessment of compensation for properties expropriated.
- (c) To design and formulate assessment of compensation models in terms of law of equity as a remedy to minimize losses and unjust enrichments to either party.

**Scope of study**

Compensation is recognized as an important concept, for which equity that paves way to redress an effected party for losses. Equity principles totally reject unjust enrichments and strongly recommends reasonable compensations to bring the person affected to the same position where he was placed before damage caused.(Peiris,1972)

It has been observed, a lot of confusions and dissatisfactions often exist in the society, due to inadequate compensation for damages. Study extends to identify inadequacy of compensation and the ignorance of such damages by which unjust enrichments take place in contrary to equity principles.

Close examination to the effect that whether losses and unjust gains occur as a result of operation of statutes – ex- Land Acquisition Act. No. 9 of 1950. It is understood via pilot survey that there is general opinion of the public that the compensation under Land Acquisition Act does not comply with equity principles although those such provisions are legally acceptable. This is tested within scope of the research. Reasonable study on these issues are to be analyzed within the scope of this study to bring about social justice, if any unreasonable losses and gains are discovered.

Any act which causes damages to a property or person may be physical (actus reus) or mental (mens rea) nerves shock. Whatever may be the damage a reasonable compensation is recognized by the civilized society and rule of law.

## **Methodology**

Present research encompasses the concepts of unjust enrichments and losses occurred in the area of compulsory purchase.

Literature review consists of books, journals, magazines, reviewed papers, thesis and dissertations, relevant judicial decisions, statutory Acts and professional guides. Above references accessible via internet and libraries. Primary data collected from thirty professionals in the field of real estate valuation via questionnaire and to be analyzed in descriptive manner.

Judicial decisions both local and foreign to be studied and analyzed with reference to the interpretation of terms and damages and compensation; and how it should be applied in real terms in the event where the actual loss to be compensated against the loss. Since author intends to assess the injustice in current systems of compensation in Sri Lanka , more relevant judicial decisions and the views of judges to be collected with special reference to the principles stemming from law of unjust enrichments and equity.

Method of analysis comprised of,

Compilation and arrangement of data in tabular form for easy reference

Compilation of clients' views on compensation to decide on the satisfaction of owners on current method of assessment of compensation

Calculation with typical example on IA and betterment of acquired land to test the reasonableness of current IA and unjust enrichments of betterment

Select relevant case law referred to, and examine the position of current compensation, in keeping with law of equity

Primary data collected from 30 professionals via structured questionnaire and interviews. The sample selected comprised of well qualified and experienced valuers from the valuation department and the private sector and over 80 % of them are currently engaged in doing assessment of compensation for lands acquired under the Act. Thirty owners whose lands were acquired were interviewed to test their satisfaction on the expropriation procedure and the quantum of compensation.

Secondary data were collected via judicial decisions, legal principles, guidelines from different Institutions such as UNO, FAO, RICS and World Bank referred literature collected from inter net and libraries.

### **Compensation under Land Acquisition Act**

In dealing with the compensation under compulsory acquisition plethora of judicial decisions will be studied to determine the reasonableness of the current compensation to the person whose lands were taken over. Over thirty professionals in the field, namely real estate valuers and estate managers will be interviewed and structured questionnaire will be distributed and collected for analysis. In determining the reasonableness of compensation under the Act, the claimants are expected to be interviewed, whose lands were taken over by the state in the recent past.

### **Derivation of objectives**

The views of professionals on the compensation under the statute will be analyzed with special reference to judicial decision. The aim is to achieve whether the current system of compensation complies with the principles of unjust enrichments and law of equity.

On the contrary claimants are to be interviewed to get their opinion on the compensation for their lands acquired under the Act.

The losses and unjust enrichments are addressed by real estate principles and law of equity. It was computed the losses and unjust enrichments under injurious affection, betterment and entity principles by means of relevant computations.

By final analysis it is expected to suggest a model for assessment of compensations in respect of lands acquired under LA Act.

Final Outcome: Losses, damages and compensation based on equity principle of that “no one should be unjustly enriched at the expense of another”.

### **Literature review**

#### **COMPULSORY PURCHASE**

Acquisition of land is defined as the acquisition of ownership of private property by the state on behalf of public, through a framed legal process for the use of society. Land Acquisition Act of 1950. (LA Act)

Forms of land tenure existing in a country have an important effect on the system of expropriating land for public purposes on the nature of compensation payment for such acquisitions. The scope of the public sector influences the scope of expropriation in practice. Expropriation is always a measure of last resort in the transfer of land – ownership rights from private hands to the community. A more gradual means of transferring the



ownership to the public authorities is through the establishment of private treaty right which gives public authorities the rights of first purchase on any land that is offered for sale by a private individual. Darin (1966). One aspect of the land use for collective needs in human settlements is the right of public authorities to acquire the lands for public purposes through a legal procedure. The importance of such public rights and their effects on the land use patterns of human settlements depends on the nature of the public purposes and how they are formulated on the procedure employed for transferring property rights from the individual to community and on the appropriateness on compensation payments. These dominant features of expropriation legislation vary according to the socio economic structure of the country, its land tenure system, the importance of the public sector in the economy, and whether the land viewed primarily as a natural resource or as a commercial good.(Drain, 1966).

Evaluation should take in to account the normal increase in land value and not that resulting from development scheme. In Sri Lanka this is experienced in many perspectives. (UDA Law,1978)(GCEC, Law,1978). On the other hand this is a freezing of land values to create unjust enrichment environment to either party.

In practice, owing to inequity of compensation, the officials in some countries tend to fix higher compensation than is provided by the law. In Sri Lanka this concept is reflected in the system paying additional compensation under LARC.

One of the arguments against expropriation methods is that injustice occurs when some land owners must sell while others are free to keep the land. Freezing all land prices in an area at given date may create a situation in which all land owners have the same right and the same obligation when eventual expropriation occurs. Obviously such a price must be adjusted in order to ensure the real monetary value of land. Using such price - freezing as a basis for compensation may limit purchases for speculative reasons, since in the case of expropriation, the land would be compensated for, on the basis of the former frozen land price. Such system of course must be connected with taxation methods that ensure that the additional value driving from the urban growth and decisions by public authorities shall be transferred to the community. (PlantationBhd V Tanah Kelang 1984) 1 M.L.J.275 F.C

### **Definitions**

Dictionary meaning of compulsory purchase “house or other property by a local authority or state department for public use to make way of development, regardless of whether or not owner wishes to sell.”([www.thefreedictionary.com](http://www.thefreedictionary.com) /compulsory+purchase)

Camebridge dictionary defines compulsory purchase as demand made by public authority to buy land or property from private owner in order to use the land for public purpose.([www.thefreedictionary.com](http://www.thefreedictionary.com) /compulsory+purchase)

Compulsory purchase order (CPO) is a legal function in UK and Ireland that allows certain bodies which need to obtain land or property to do so without consent of the owner. It may be enforced if the purpose is considered as one of the public betterments. (<https://en.wikipedia.org/wiki/compulsory-purchase-order>)

Compensation is also defined as a solution, which refers to the sum of money payable to a person to make up for loss or inconvenience and sum of money payable over and above the actual damage as compensation for injured feeling. Watson V Murry (1955), Paul, A Callam PLC (2012). (Calamlaw .Com/blog/legal – updates/unjust enrichment)

### **Land Acquisition Sri Lanka**

#### **Evolution**

Field of compulsory purchase dates back to 1876 where No. 3 of Land Acquisition ordinance was enacted. In fact this enactment was modeled with Land Clause Consolidation Act of 1845 of England. The main terms of compensation was the market value plus 10 % of compulsory nature of acquisition.

1876 Ordinance was amended by Act No.28 of 1964.

Subsequently the ordinance was repealed by LA Act which is also a model of Land Clause Consolidation Act of 1845 of England and Acquisition of Land (assessment of compensation) Act of 1919 and Acquisition of Land Authorization Act of 1946.

#### **Current Developments and Legal Environment**

Currently Land Acquisition Act of 1950 is in force. In addition to that Regulations of 2008 is being utilized for payment of compensation. A system of Land Acquisition Resettlement Committee (LARC) – cabinet paper A

Memorandum 05/957/4/15 dated 20. 07. 2005. This is being applied for payment of compensation for acquired lands. This was specially formed to grant ex gratia payments. LARC is applicable only for foreign aided projects. Formerly this was used for road widening projects and now it has been extended to other projects under mining Petroleum development and Petroleum development etc by cabinet paper A Memorandum 747/508/18 dated 30. 05. 2012.

National Policy cabinet Memorandum 7/2025/336/1/1 dated 02. 11. 2007.on payment of compensation, applicable for acquisition where section 2 is published after 01.09.2008. The concept introduced under Regulations is “value to the owner”

Again cabinet paper No. 13/258/533/44 dated 07. 03. 2013 was approved to pay additional compensation although the lands have been compensated under Regulations. This cabinet paper applicable for selected projects of Colombo – Katunayaka express high way, outer circular road etc.

In National Policy ex – gratia includes the rent allowance to the occupier , removal of expenses, informal loss of employment, even for tenant when he is in occupation for more than 10 years a portion of ex – gratia payment for the building is also paid for the tenant.

However there are arguments on the validity of such Regulation. Section 63 of the main Act specifies that minister may make Regulations for the purpose of carrying out or giving effect to the principles and provisions of the Act. This means that Regulation cannot amend material facts of the principle Act, therefore this will be contrary to the principal Act.

In addition to the above following statutes have been enacted to acquire the land under the main Land Acquisition Act of 1950.

Urban Development Authority (UDA) Act No.41 of 1978.

National Housing Development Authority (NHDA) No. 17 of 1979.

Mahaweli Authority of Sri Lanka Act No. 23 of 1979.

Walwe Lands Act No. 11 of 1958.

Paddy Land Act No.1 of 1953 & No.22 of 1955.

Agrarian Development Act No.46 of 2000.No.64 of 1988 and etc.

LandAcquisition Ordinance (Chapter 203) Legislative Enactment of Ceylon. Prior to the Act No. 9 of 1950, the compulsory purchase was regulated by the Land Acquisition Ordinance mentioned above.

Land Acquisition Act of 1950 repealed which the ordinance currently covers the area of compulsory acquisition in the country.

In *Sam V Kander* (1981) it was held that loss of amenities and the like which future loss of earnings and loss of earning capacity of (building) a thing should be considered for the valuation for compensation.

In *Phuah V Nila* (1973). 186, 188 CA Choor (J) held that the value of money should be considered in determining the damage. (Inflation). In other words it is time value of money. *Tin Vui V Patrick* (1980) held that allowance has to be made for diminishing value of money when deciding compensation.

“The damage for suffering should include damage for loss of future earnings” court held in *Lin V Hock* (1967).

“Damage is not to enrich but to compensate. Therefore plaintiff has the duty to mitigate to reduce the loss”. Held in *Eley Va Bedford* (1975).

In *Watson V Murray* (1955), it was held that the claimant is entitled to full compensation for the loss. He should be entitled to recover special damages such as loss of profit and business etc.

Alias, A. & Daud, M.N. (2006) ‘Payment of compensation for land acquisitions in Malaysia’. *Pacific Rim Property Research Journal*, Vol.12 (No.3).

In *G.A. Southern Province Vs Silva* 3 NLR 235, Bonsor CJ stated that Market Value is the value of a house that does not depend on the money expended on it, nor on the difficulties which had to be overcome in building it which means that value depending on the market forces.

*Steven V. Munasinghe* 42 NLR 446, where it is claimed that the market value of a land acquired by crown should be determined by the best use to which it could be put, there must be evidence that there would be a demand for the land when put to such use having regard to its nature and situation.

In *Livingstone V Rawyards* Cod 10 (1980) Lord Blackburn has endorsed the above concept, stating that objective of compensation is to restore the loser to the former position he was before sustaining the loss. Here it is evident that in doing so time value of money should be strictly concerned. Fleming, D. (1995). *Compensation or Restitution- an analysis of Hungarian Land Compensation Act.* *Journal of property valuation*. February 2013 No.121.

Award of money as damages aims to compensate the innocent party who has suffered as result of a breach. General rule pertaining to the compensation is

that innocent parties are entitled to such damages as it will put them in position they would have in, if contract had been satisfactorily performed. Elliott (2011). Panda.R. K. (2007). 'Resettlement and rehabilitation issues in Uttaranchal (India). Disaster Management and Prevention Vol.16. 3.

In a celebrated judicial decision of Municipal Council of Colombo V Lechiman Chettiar (Privy Council Appeal 25 of 1946), popularly known on Vajira road case, the Privy Council firmly accepted the entity principle in making valuation for the acquired land under the said statute. This is an issue identified that creates worst situation in making valuation for expropriated property.

### **Guidelines of some organizations on compulsory purchase**

#### **United Nations**

United Nations Land Tenure and compulsory acquisition and compensation by Keith and Ansal (2006) explains and lays down important guidelines on the above subject.

Protection of due process and fair rules that place reasonable constraints on the power of the government compulsorily acquires the land strengthened the confidence of people in the justice system, empower people to protect their land rights and increase the perception of the tenure security.

The document further explains the problematic issues when compulsory acquisition is not done properly.

- (i) Reduced tenure security.
- (ii) Reduced investments in the country.
- (iii) Weakened land market and depress land values.- Threats to tenure security and discourage land transactions. It also reduces the accessibility of land as collateral, discourage people from investing or maintaining their property
- (iv) Delay projects – Appeals against unfair procedure delays the project.
- (v) Inadequate compensation paid to the owner - Financial awards may be inadequate to allow people to enjoy sustainable livelihood after their lands are acquired.
- (vi) Equivalent compensation. Viitanen, K.(2000) 'Just Compensation in Expropriation' JS 26 Education of Valuers –collecting substance for virtual Academy, Institute of Real Estate Studies, Helsinki University of Technology.

### **World Bank**

According to the World Bank Definitions for Involuntary Resettlements Source Book stated the following (<http://www.worldbank.org>)

This refers to the transfer of decision making power to the people affected (for example, providing dispossessed persons(DPs) with options for their rehabilitation, among which they choose). Participation, in this sense, involves empowerment and represents a step by which DPs resume responsibility for their lives. Extension of choice may be more relevant in projects involving physical relocation or economic rehabilitation.

Defining income restoration operationally depends on economic conditions in the project area. Most simply, “income restoration” can refer to reestablishment of income levels prevalent at the time of displacement. This narrow interpretation, however, is inconsistent with Bank policy objectives and insufficient for achieving these objectives for a number of reasons: Bank policy refers to “restoration of incomes” as the minimum acceptable outcome. Improvement in income is the policy objective. Resettlement plans (RPs) should therefore include income generation strategies to at least restore income and measures to yield improved incomes and living standards. Rural Development Institute (2007).’Compensation and Valuation in Resettlement; Cambodia and India.

DPs cannot be made to suffer loss of income levels and living standards during the transition to income restoration. Income restoration needs to be based on productive income-generating activities. Although cash payment may be appropriate under certain circumstances, in other cases Displaced Persons may use cash payment for consumption, preventing the acquisition of productive assets. Income restoration refers to recovery of aggregate household resource flows. But livelihoods are often based on both the formal and the informal economic activities of all members of a household. To consider the impacts of income restoration activities on equity and the distribution of opportunity within the household is therefore also important to consider including Gender Issues. Income-generating activities must be legal and culturally appropriate. Income restoration does not cover illegal or immoral activities.

### **2.3.3.3. RICS (2012)**

Compulsory Purchase is where the state or a public body is allowed to take over the property by rights where it is needed in the public interest.

Property owner's reasonable professional fees can be reclaimed from the acquiring authority so this means that if the owner had hired a professional for advice or assistance he should be able to get claim back from the acquiring authority once the property has been taken.

RICS guidelines advise that when one is affected by compulsory purchase he should reasonably and should not undertake the actions that will unnecessarily increase the compensation. So it is clearly evident that the RICS has categorically accepted that the compensation should be an equivalent amount to the real loss to bring the owner concerned to the same position he was before the acquisition. On the other hand as identified in the conceptual frame work of the current research unjust enrichment is not permitted. ([www.rics.org/consumerguides](http://www.rics.org/consumerguides))

#### 2.3.3.4. FAO-Land Tanure 10

Law should be specific enough to provide clear guide lines but flexible enough to allow determination of equivalent compensation in special cases. There may be certain items to be compensated that are not foreseen at the time of passing the law in the legislature.

Compensation should be addressed to both de facto and de jure rights in an equitable manner. When occupants have no legal rights or claim to the land they may be entitled to resettlement Food and Agricultural organization of United Nations FAO Land Tenure 10. Odame,W. (2008). (<http://www.fao.org/org/nr/lt/en/lt-en-en.htm>)

Section 47 of this Act the amount of compensation payable in respect of any vested property shall be the actual price paid by the owner of the purchase of such property. However an additional sum equal to the reasonable value of any additions improvements made to such property is also payable. If such purchase prices not ascertainable compensation is based on an amount equal to the price which such property would fetch if it had been sold in the open market on which the property was vested in corporation or authority.

#### **Past studies**

2.4.1. 'Communal Land acquisition and Valuation For Compensation in Nigeria' Sule, Abass Iyands (2014). Department of Estate Manegement and Technology Minna Nigeria. International Journained I of Scientific Research Publications volume 4 issue 11 Nov . 2014.

The author concludes that the relevant Act cannot guarantee adequate compensation. It therefore recommends an amendments to the present Act to reflect realities as regards ownership and transparent method of assessment for compensation.

2.4.2. “Valuation Approach and the Challenges Confronting Valuers on Compensation Valuation for Compulsory Acquisition under the Land Use Act in Nigeria” Joseph and Michael (2015) (www.globalacademicresearchjournal .org)

Author in this study attempted to study the nature of compensation under Land Use Act in Nigeria. He has identified that the process of determining compensation for compulsory is inadequate and has described ad hoc and lack of transparency. (Kkulu,2007) and (Nuhu, 2009) and that current method of compensation is not satisfactory. This study pointed out two conclusions as,

- i. Current method of compensation by Land Use Act is inadequate.
- ii. Compensation should be in accordance with legal definition of compensation.

2.4.3. “Compulsory Purchase Valuation Principles Spanning 150 years”Vaughan and Smith (2014) BLM, Salisbury House , London Wall, London, EC2M5QN.

At the very outset of the report author states that the basic property rights will be the right of compensation in compulsory acquisition. This position has been established in *Spirerose V Transport for London* (2009). 1 WLR 1797 and *Waters V welsh* (2004) 1WLR 1304.

He also confirms the principle of equivalence for compensation under compulsory purchase Courts consider the compensation that the owner should be compensated to ensure no better or worse position financial than they would have been compulsorily acquired.

This is a good concept that can be considered in making model for the compensation under Land Acquisition Act of Sri Lanka avoiding losses and unjust enrichments for the party concerned. This is on the other hand is an objective of the current research.

Another vital fact relevant to the current study is the restriction of any increase in value of the property as a result of acquisition. This has been



affirmed in *Pointe Gourde V Sub Intendent of crown lands*. This principle is known as *Pointe Gourde rule* or 'no scheme rule'.

This also shows that an event of unjust enrichment by the authority and the loss to the owner.

Author concludes that the existing statutory law is inadequate to compensate and required reforms are suggested. Similarly in Sri Lanka to the Land Acquisition Act to subject to arguments.

'Payment of compensation on property rights acquired under Land Acquisition Act' M.Sc dissertation (2013) by L.H.Lickson. (Deputy Chief Valuer state valuation department of Sri Lanka) In this research author has identified that there is no consistency in the assessment and payment of compensation in respect of the property acquired by the government.

He concludes that different methods are applied at different places of acquisition under Land Acquisition Act and there is no consistency in the payment and recommends reasonable methods of assessment in the project of compensation and this has undoubtedly given rise to unrest in the owners whose lands were acquired.

Summary of issues identified from the above literature with reference to objectives and conceptual frame work of the current research owner should be adequately compensated.

Unjust enrichment should be minimised.

Losses have to be identified and compensated.

Latent and indirect losses and should be deeply concerned.

Compensation should be based on value to the owner.

Owner should be resettled and brought back to former position before acquisition in terms of financial and social perspective.

Persons interested category should extend to others such as tenants.

Payment procedure should be flexible.

Owner should be given a prominent place in the assessment of and payment of compensation.

No party should be suffered by the procedure of expropriation.

No one should be unjustly enriched at the expense of another.

Man who seeks justice should come in clean hands.

### 3. Analysis

This analysis is based on the equity principles that the affected party should be brought back to original position before the said loss caused to him, stemming from the concept that no one should be unjustly enriched at the expense of another guided by legal principles and definitions of law of equity, case laws and guidelines stemming from relevant institutions.

The intention of the legislature at the time of passing the Land Acquisition Act in 1950, was bona fide, that such land should be acquired for public welfare and undoubtedly the actual loss to the claimant should be paid by compensation.

Therefore the interpretation of the statute should not be under literal rule, but golden rule should be followed in ascertaining real essence of the Act. In celebrated judicial decision of *Tennekoon V Tennakoon*, courts held that in the interpretation of the statute, that one should not plainly stick to the lateral meaning of the same but it is essential to understand the real intention of the legislature at the time of passing the statute in the legislature.

Courts have strongly accepted the view that the compensation should be equal to the actual loss. (*Victoria Laundry Ltd. V Newman*)

Example : Section 45 of the Act states the market value of the land acquired should be awarded to the claimant and at the same time under same section of the Act lays down the rule that market value of the acquired land should be valued as an entity. (*Municipal Council V Lechimans Chettiar*) Interviews and questionnaires of the qualified, over 90 percent of learned professionals endorsed the concept that the compensation should be equal to the loss to the claimant, but the valuation as entity never gives the actual loss to the claimant, where injustice caused creating unjust enrichments by the state.

In such circumstances it is no doubt that under the current practice the compensation paid under Act create many instances where losses and unjust enrichments exist in such situations principles stemming from laws of natural justice are strongly violated.

Interviews were held and structured questionnaires were filled by the incorporate real estate valuers and real estate managers strongly responded to the effect that the actual loss caused to the owner of acquired land under the Act, shall be fully compensated not allowing any gap between the actual lost and the estimated compensation. This position has been confirmed by the 90 percent of valuers interviewed. Hundred percent the persons interviewed

strongly agreed that the compensation under the provisions of the current L A Act is insufficient causing damages to one party while other party is unjustly enriched. This complied with the judicial decision of *Blundell V R* (1905). Eighty percent of incorporate valuers confirmed the views that the valuation under entity principle is not justifiable under equity. In situations where strips of land acquired for road widening, a strip valuation as an entity is estimated for award. According to valuers and the author who himself an incorporate valuer it is confident that the market value of a strip is much more less market value of similar land but buildable. On the other hand owner of such strip of land will never be a willing seller to satisfy the requirement laid down in Section 45 of the Act. This entity principle has been discussed in *Vajira road case ( M. C. Colombo V Lechimi Chettiar)* affirmed that under the Act strip of land should be valued as entity.

Questionnaire next referred to the relevant date of valuation. Relevant date is the date of publication of Section 7 and valuation based on that date.

However Section 2 & 4 will be published perhaps long before the publication of Section 7. Eighty (80) percent of valuers responded that these dates affect the value of property to be acquired and at the end of the day owner of acquired land is losing while the state unjustly enriched (Gunaratne 2009). Some respondents expressed that in view that in Knuckles conservation project, Section 2 & 4 published about 10 years before the publication of Section 7, respective land owner vacated their lands, cultivations were abandoned with the impression that their lands were to be acquired soon. During long period of time between Section 4 and Section 7, values dropped due to neglected nature of lands. Respondent concluded that land owners had to bear big losses that were not compensated, while state gets a clear cut enrichment that can be categorized as unjust.

Question No. 4 & 5 referred to Injurious Affection (I A) and betterment, which are restricted to a maximum of twenty (20) percent of the valuation. Sixty percent of valuers personally interviewed argued that, in most of the instances they have convinced with the fact 20 percent IA is insufficient to cover the actual injury to the balance land. Following typical example shows that the effects of IA to the owner of acquired land.

Extent of land -	8 P
Extend acquired	- 3 P
Free market rent	- Rs. 10 per sq ft pm
Total floor area	- 1000 sq ft
Acquired area -	400 sq ft

(i)	<u>Value of acquired portion</u>		
	400 Sqft x 10 x 12 (net)	-	Rs.48, 000.00
	YP @ 4%	-	<u>25</u>
	Value	-	<u>Rs. 1,200,000.00</u>
(ii)	<u>Value of portion retained portion</u>		
	600 Sqft x 10 x 12 (net)	-	Rs.72, 000.00
	YP @ 4%	-	<u>25</u>
	Value	-	<u>Rs.1,800,000.00</u>

(iii) Value of portion retained after acquisition

Original rent decreased due to loss of originality of the building resulting lower demand.

	Rent – say Rs. 6.00 per Sqft		
	600 sqft x 06 x 12 (net)		Rs.43,200.00
	YP @ 4%		<u>25</u>
	Value	-	<u>Rs.1,080,000.00</u>
	<u>Loss to the remaining portion</u>		
	Above (ii) - (iii)		Rs.720,000.00

(iv) Calculation of IA as per Act

(a)	<u>Investment Method</u>		
	1,200,000 x 20/100	-Rs.	240,000.00
(b)	<u>Contractor's Method</u>		
	3P @ Rs. 50,000.00 p.p.		Rs. 150,000.00
	400 Sqft @ Rs. 3000.00 per Sqft		<u>Rs.1,200,000.00</u>
	Total		Rs. 1,350,000.00
	1,350,000 x 20/100	-	Rs. 270,000.00
	Average IA	-	<u>Rs.255,000.00</u>

Comparison

Real IA	-	Rs.720,000.00
IA calculated under Act	-	<u>Rs. 255,000.00</u>
Loss to owner	-	<u>Rs. 465,000.00</u>

Loss of IA is Rs. 465,000.00 which is an unjust enrichment by the state.

In Addition following observations have to be made

- (i) Perhaps the balance land may become undevelopable under planning law because extent left after acquisition is less than 6 P. In other words invariably 3P land has no demand in the open market. This issue has been completely ignored in the provisions of the Act.

- (ii) Portion of the building left needs considerable cost to reinstate and to make it habitable or fit for any other purpose. The breaking acquired section may cause structural failure that will restrict the economic life of the building retained and this too gives rise to poor cash flow.
- (iii) Assuming that building is renovated to habitable status, the rate of rent received from the original property is comparatively low as the new construction does not give the architectural features and usage to the occupant.
- (iv) Claimant will definitely has to incur higher building cost compared to the cost incurred at original construction. This is in fact a loss.
- (v) The inconvenience he bears due to loss of original property he enjoyed before acquisition is not compensated by the Act.
- (vi) Claimant loses his credit worthiness after portion of the property acquired.
- (vii) Perhaps the limits to the front land and as a result owner loses the appurtenant land which severely affect the property value of the retained portion and perhaps his business.

In addition to the above calculation on injury to the balance land Some adjustments based on the above observations have to be made to arrive at the most appropriated I A.

They may be summarized as follows ;

- (a) Cost of reinstatement
- (b) Loss of convenience (ex. Appurtenant land)
- (c) Loss of credit worthiness & difficulties on credit facilities.
- (d) Other discomfort ( poor accommodation)
- (e) Mental depression
- (f) Any other fact as the case may be.

Concept of betterment reference to a question in the structured questionnaires 100 percent agreed that collection of betterment is unfair because calculation is baseless. This concept has been accepted in South Eastern Railway V London County Council.

Example : Land A is acquired for a public purposes, value of adjoining lands tend to go up in price; and those owners unjustly enriched as a result of state act. ; where as the acquired land is subject to levy of betterment that is identified as an unjust enrichment on the part of state.

On the other hand, by collecting betterment from the acquired land state unjustly benefited, whereas actually such owner is not really benefited. Basically betterment is a mode of collection of unjust enrichment, perhaps by way of rates and taxes. But it is evident that such collection is not regularized.

On the other hand statutory collection of betterment is clearly exhibited in Greater Colombo Economic Commission acquisitions market values were freezed and the compensation restricted creating unjust enrichments.

Land A in extent 2 Roods acquired for a development activity, which resulted increase in land values at a faster rate. Around the boundary of the acquired land, price went up by 20 percent. Prior to the acquisition the rate per perch fetched Rs. 100,000.00 and in subsequent to acquisition rate rested at Rs. 120,000.00 P P in the market. There were adjoining lands in extent 80 p each.

Calculation of market value under L A Act

80 P @ Rs. 100,000.00 P.P.		Rs. 8,000,000.00
Accordingly each adjoining owner getting betterment of		Rs. 20,000.00 PP
i e for 80 P @ Rs. 120,000.00 P P	-	<u>Rs.9,600,000.00</u>
<u>From owner's point of view</u>		
Market value Rs. 100,000.00 x 80	-	Rs.8,000,000.00
[benefit or increase not given to owner by the Act]		
Less 20 % for betterment	-	Rs.1,600,000.00
Owners share	-	<u>Rs.6,400,000.00</u>
Loss to claimant 9,600,000 – 6,400,000 =		Rs.3,200,000.00
<u>From adjoining owners' point of view</u>		
Enhanced value	-	Rs.9,600,000.00
Value existed	(Rs. 100000 x 80P)	
Owners share	-	<u>Rs.8,000,000.00</u>
Enrichment	-	<u>Rs.1,600,000.00</u>

Under Act state does not collect the betterment and adjoining owners unjustly enriched at the expense of state. When adjoining land owners are gaining Rs.1,600,000.00 the owner of acquired land owner suffered by a loss

of Rs. 3,200,000.00 This undoubtedly contrary to the principles stemming from the law of National Justice.

Matters to be ignored

Section 48 (d) specifies that any damage which after the award of compensation, is likely to be caused by or in consequence of the use to which the land is put, after its acquisition under the Act will not be considered for the compensation.

The legal principle established by the judiciary is that the person who suffered should be put into the same position where he was before acquisition (Ricketts V Metropolitan Railway Co. 1867) confirms the situation. Section 48 (e) states that any increase that is likely to occur in the market value of the land by reason of the use which it will be put after its acquisition under the Act should be ignored when computing compensation.

Section 46 (iv) lays down that change of residence to be included in the quantum of compensation.

According to equity principles the person who is dispossessed should be brought back to same position who was before the acquisition. This position has been affirmed by the guidelines laid down in United Nations publication on Land Tenure & compulsory Acquisition (2006), that says that people who are dispossessed as result of acquisition, gives rise to loss to the owner and this should be compensated.

However the Act in Section 46 (iv) specified that any reasonable expense in connection with change of residence necessarily caused by the acquisition of the land will be paid, which is never sufficient to fulfill the requirement of laid down in United Nations guidelines.

Discussion on Section 46 (iv) clearly shows that the expenses recommended by the Act does not comply with the United Nations guidelines and the equity principles.

Guidelines on the other hands state that the actual loss to the owner should be paid as compensation.

An acquisition of a corpus deprives the credit worthiness of the owner and that acquisition under L A Act severely affects the credit worthiness of the affected owner. After the take over the total value of his security land will be going down which in turn reduces his credit worthiness.(Gunaratna 2009)

In a nut shell the contents of United Nations guidelines in the said document refer to the fact that the operation of the statute should be equitable, making proper and reasonable compensation for the acquired lands.

This creates conflicting the principle of maintaining a good balance between public interests and individual land rights. Another important point raised during data collection is that the deed considerations in Sri Lanka is lower than the actual purchase price. There, when valuations of land for compensation based of deed values, the claimant always gets a lower value. The problem that the valuer faces ascertain the real market value due to lack of documentary evidences. This has invariably gives rise to the dissatisfaction of the owner.

- (a) Outer circular road - Ihala Paragahamuna  
 Section 2 of the Act - 4. 03. 2009  
 Section 7 of the Act - 10. 08. 2011  
 Section 38 (a) of the Act - 29. 06. 2010  
 Survey Plan No. 8010 made by Survey General.

, **Table 1**

Lot No.	Claimant	Claim Rs.	Govt. Valuation	Difference
40	A	13,000,000	5,900,000	54
178	B	900,000	400,000	55
197	C	2,300,000	440,000	80
88	D	31,600,000	4,425,000	85
144	E	1,000,000	275,000	72
268	F	3,000,000	1,800,000	40
222	G	7,200,000	642,000	91

**Lickson - 2013**

Miriswatta - Waturagama road widening

- Section 5 of the Act - 20. 07. 2010
- Section 7 of the Act - 08. 03. 2011
- Section 38 (a) of the Act - 28. 10. 2009
- Survey Plan No. G37776 made by Survey General



**Table 2**

Lot No.	Claimant	Claim Rs.	Govt. Valuation	Difference	Claimants
1	A	930,000	185,000	80	NS
2	B	1,260,000	252,000	80	NS
10	C	1,500,000	285,300	80	NS
7	D	3,160,000	600,000	81	NS
41	E	560,000	252,000	55	NS
42	F	426,000	130,000	69	NS
43	G	895,000	213,000	76	NS
44	H	352,000	423,000	16	S
64	I	300,000	213,000	29	NS
68	J	36,100,000	743,000	97	NS
8	K	2,283,000	356,000	84	NS
16	L	3,800,000	207,000	94	NS
31	M	2,370,000	700,000	70	NS
34	N	900,000	200,000	78	NS
35	O	800,000	181,000	77	NS
36	P	860,000	387,000	55	NS
37	Q	1,850,000	508,000	73	NS
72	R	1,850,000	352,000	80	NS

**Lickson - 2013**

NS : Not Satisfied

S : Satisfied

One of the significant factors highlighted in the above Tables is that only 4 % of the claimants satisfied with the compensation while 96 % is dissatisfied.

On the other hand the above tables reveal that the percentage differs between the claimant's claim and the valuation is over 50 % for 22 properties acquired out of 25 in the total under review. It is observed that the compensation received is less than 50 % in the case of 22 properties out of 25. Here 88 % of owners have got less than 50 % of what they have claimed. There is another significant fact that only list No. 44 has been valued by the state over and above the amount claimed by the owner. However it is evident that the Land Acquisition Act by its provisions has directed not to

pay anything higher what the claimant has claimed. In this situation the poor claimant loses due inflexibility in the Act.

Factor shown in Table 2, Plan No. G37776 has been valued under the regulations published in the Gazette (extraordinary) No. 1596/2, 12<sup>th</sup> April 2009. According to such Regulations the market value has been calculated not under entity principle but as a normal land (not strip value) based on the value of balance land. In spite of this the compensation given to claimants is much lower than the compensations claimed. Had the entity principle is adopted for valuation of above lots the situation will be still worse.

There is a problem of legality of Regulations so gazette because according to the original Land Acquisition Act of 1950, the basic contents of the Act cannot be amended by such Regulations

Therefore application of such Regulations for the valuation is not legal.

In certain instances government applies another tool (LARC) to pay more compensation deviating from the method under the Act. This tool is applied specially for foreign aided projects. In these cases government calculate the full market value and pay the full amount from which the compensation under the Act is met by the state and balance by the foreign aids.

The LARC system have been introduced, with the intention to compensate the client in full and on the other hand the government has accepted that compensation under Land Acquisition Act is not reasonable or not equal to the amount actual loss caused to the client.

#### **4. Conclusions**

Above analysis proved that losses and unjust enrichments prevail in the field of compulsory purchase in Sri Lanka. The feed back from the owners whose lands were acquired showed that 95 percent claimants agreed that they highly unsatisfied on the compensation they were awarded. Another significant factor identified from the analysis is that the state valuation is much more less than their claims. The difference of the state valuation and claim varied from 54 % to 91%. This shows that the owner's satisfaction on the compensation is much more on lower side.

Analysis further showed that the application of entity principle is a failure from equity point of view which has been affirmed by legal principles, case laws and professional opinion.

From the analysis it was evident that payment of IA is unrealistic causing losses to the owner in turn create opportunities to the state to get unjustly enriched.

It has been observed that the payment of consideration in other transactions are being done before or at the time of transfer of ownership. In the case of land acquisitions the payment of compensation is done after the physical acquisition of the property. This is in fact contrary to the accepted principles in equity. Therefore it is suggested that payment of compensation should be prior the acquisition or at least at the time of acquisition. In turn this arrangement will safeguard the rights of the owner whose land was acquired, to get the real value in complying with the equity principles.

Collection of betterment is purely economic harassment to the owner while unjustly enriching the adjoining owners at the expense of state.

It has been indentified that the state has now introduced new systems in addition the compensation paid under the provisions of the Act. This shows that the state has accepted the fact that current method of compensation is not in compliance with the principles of equity and other legal definitions and also the other guidelines laid down by United Nations and World Bank, FAO and RICS. Some of recommendations are preservation of social and traditional attachments, income restoration, convenience, good living environment and sufficient compensation.

Study concludes that the payment of compensation is insufficient for the actual loss incurred by the owner whose land was acquired by state under LA Act.

It is suggested that the Land Acquisition Act should amended to give the owner full compensation or the value to the owner. This will definitely comply with the principle *no one should be unjustly enriched at the expense of another* which stems from the law of Equity.

## References

- Alias, A., & Daud, M. N. (2006). "Payment of Adequate Compensation for Land Acquisition in Malaysia". Pacific Rim Property Research Journal, Vol. 12 (No. 3)
- .Calamlaw .Com/blog/legal – updates/unjust enrichment
- ‘Communal Land acquisition and Valuation For Compensation in Nigeria’ Sule, Abass

- Iyands (2014). Department of Estate Management and Technology Minna Nigeria. International Journal of Scientific Research Publications volume 4 issue 11 Nov . 2014.
- en.Wikipedia.org/wiki/unjust-enrichment
- Fleming,D.(1995)."Compensation or restitution?- An analysis of the Hungarian Land Compensation Acts 1991-92". Journal of Property Valuation & Investment, Vol. 13 (No. 4), pp. 71-78.
- Guidelines under - FAO Land Tenure 10
- .Hettiarachchi, J.N.(2009), 'Current method of Compensation under Compulsory Purchase and its Impact on Law of Equity' Sri Lanka Journal of Real Estate, Sri J'Pura university.
- <https://en.wikipedia.org/wiki/compulsory-purchase-order>
- <http://www.worldbank.org>
- <http://www.fao.org/org/nr/lten/lten-en.htm>
- .Hudson, A.(1999). 'Principles of Equity and Trust' Cavendis Publishing Ltd. London.
- .Hurd, H.(2003). Nonreciprocal Risk Imposition, Unjust Enrichment'. Nortre Dame law Review..
- Jonker,A.J.(1984), Property Valuation in South Africa, Cape Town, Juta and Co. Ltd.
- .Joseph and Michael (2015) "Valuation Approach and the Challenges Confronting Valuers on Compensation Valuation for Compulsory Acquisition under the Land Use Act in Nigeria" (www.globalacademicresearchjournal .org)
- Lickson, L.H. (2013) M.Sc dissertation (Deputy Chief Valuer state valuation department of Sri Lanka.
- Odame, W. (2008). "Compulsory Land Acquisition and Compensation in Ghana: Searching for Alternative Policies and Strategies".
- Pande R.K., Pande R., (2007) "Resettlement and rehabilitation issues in Uttaranchal (India) with reference to natural disasters" Disaster Prevention and Management Vol. 16 No. 3, pp. 361
- Paul, A.PLC (2012). Calamlaw. Com/blog/legal-updates/unjust enrichment.
- Peiris, G.L.(1972). 'The Law of Unjust Enrichment' Staford Lake (Pvt) Ltd, Pannipitiya, Sri Lanka.
- Peiris, G.L.(1972). 'The Law of Property in Sri Lanka' Vol.1, 2<sup>nd</sup> Ed. Staford Lake (Pvt) Ltd, Pannipitiya, Sri Lanka.
- Peiris, G.L.(2006). 'The Law of in Sri Lanka Sevitude and Partitions' Staford Lake (Pvt) Ltd, Pannipitiya, Sri Lanka.

- Prematilala, M. (2002). 'Apartment Ownership Law' Leed Graphics Ltd. Nugegoda.
- [uslegal.com/u/unjust-enrichment/](http://uslegal.com/u/unjust-enrichment/).
- Vaughan and Smith (2014) "Compulsory Purchase Valuation Principles Spanning 150 years" BLM, Salisbury House, London Wall, London, EC2M5QN.
  - Viitanen K. (2002). "Just Compensation in Expropriation?" JS26 Education of Valuers – Collecting the Substance for Virtual Academy, Institute of Real Estate Studies, Helsinki University of Technology
- [www.thefreedictionary.com /compulsory+purchase](http://www.thefreedictionary.com/compulsory+purchase)
- [www.globalacademicresearchjournal .org](http://www.globalacademicresearchjournal.org)

#### Case law

- GA South Province V Silva 3 NLR 235.
- Lim V Hock (1967) 1mj105 FC.
- Mannugee V Akloo (1947).SA 733.
- Mc Creary V Sields (1952) 333.Mich.290,294,52,NW 2<sup>nd</sup> Ed. 853.
- Morris Pump V Centerline Piping. Inc.273
- Municipal Council Colombo V Lechiman Chettair, PC Appeal 25 of 1946.
- Phuah V Nila (1973) 1 M L J 186, 188 CA
- PlantationBhd V Tanha (1984) 1 MLJ.275 FC.
- Sam V Kander (1981) 1 M L J 295 FP.
- Steven V Munasinghe 42 NLR 446
- Stomot V Secretary of Environment. (1977).
- Watson V Murray(1995).2 QB 1

## **Guidance on Public Sector Accounting Standard and Valuation Standards for State Assets Valuation<sup>a</sup>**

**A.V.U Wsantha<sup>1</sup>**

<sup>1</sup>District Valuer

Department of Valuation

[upulwasantha@yahoo.com](mailto:upulwasantha@yahoo.com)

### **Introduction**

This guidance should be read in conjunction with the Sri Lanka Public Sector Accounting Standard (SLPSAS), Sri Lanka Accounting Standard (LKAS), International Financial Reporting Standard (IFRS) and Valuation standards of the Royal Institute of Chartered Surveyor (RICS).

Public sector entities are deliver services to the community without considering the cost and profit. These types of entities typically control vast portfolio of assets which they use to deliver services to the community. They may include land and buildings, miscellaneous plant and equipment and infrastructure such as roads, footpath, bridges, water streams, sewerage, power line, mineral assets, etc.

Many assets in the public sector have few or no alternative uses and many infrastructure assets as specialized. The aim is to provide relevant and reliable information for decision making and ensure a consistent approach to asset valuation across the public sector institutions in Sri Lanka.

To the purpose of ensure consistency of assets reporting in the final accounts is the main purpose of this standard. Therefore operation of public sector institutions can be compare with each other as well as compare with previous years of the same institution. Public sector jurisdictions that implement accrual accounting after require the financial statements to bring their assets to account in the financial statement at fair value as defined by the accounting standard.

### **Public Sector Accounting Standard for state states Valuation**

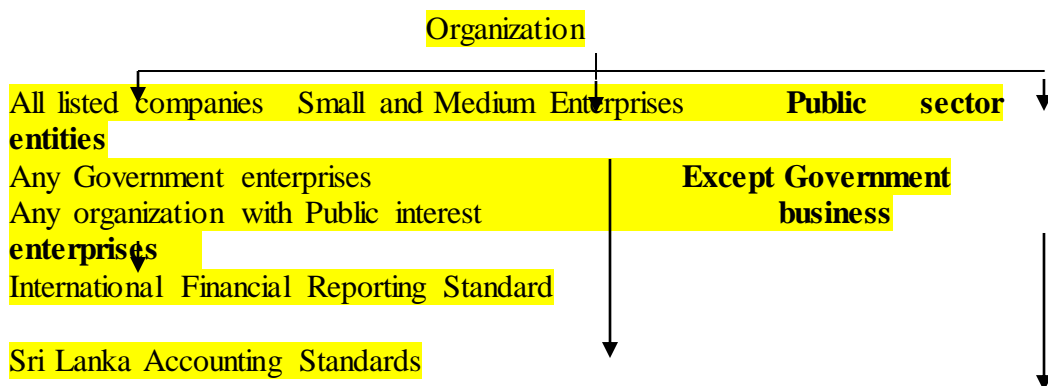
According to the Accounting Standards issued by the Chartered Accountants of Sri Lanka (ICASL), different organization should follow different Accounting Standards on the level of business activity and ownership of organization.

---

<sup>a</sup> “ The content in the article is opinion of the writer and not the department of valuation”

This article specially focuses of the assets valuation of public sector entities except government business. These are non-profit purpose organization and these are surviving under the government allocation made by the government treasury through the government annual budget.

For the purpose of consistency, accounting application called accrual accounting method is applied to the create financial accounts of the government organization. The following figure indicates the flow.



### Sri Lanka Public Sector Accounting Standards

As the premier National Accounting body of Sri Lanka (ICASL) has established a Public Sector Accounting Standard Committee (PSASC) under the Chairmanship of Auditor General of Sri Lanka including nominees from the ministry of Finance and Planning to develop Public Sector Accounting Standard (SLPSAS). Considering the International Public Sector Accounting Standards (IPSAS), International Financial Reporting Standards (IFRS) and Sri Lanka Accounting Standards, Public sector Accounting Standard Committee (PSASC) has presented 10 Public Sector Accounting Standard. Out of these standards four standards are presented in the year 2009 and other five standards are presented in the year 2012. These standards are

- SLPSAS 1 -Presentation of Financial statement.
- SLPSAS 2 -Cash Flow Statement
- SLPSAS 3 -Accounting Policies, changes in Accounting Estimates and Errors.
- SLPSAS 4 -Borrowing Cost
- SLPSAS 5 -The effect of Changes in Foreign Exchange Rates.
- SLPSAS 6 - Event after the Reporting Date.
- SLPSAS 7 -Property Plant & Equipment

- SLPSAS 8 -Provisions Contingent Liabilities and Contingent Assets
- SLPSAS 9 -Inventories
- SLPSAS 10 -Revenue from Exchange Transaction

When consider the state assets valuation, important accounting standard is **SLPSAS 7-Property Plant & Equipment**. This standard mentions that, assets should be valued considering the fair value basis.

### **Application of Standard**

SLPSAS 1 -Presentation of Financial statement.

According to this standard, government entity should present **General Purpose Financial Statement (GPFS)**. This means financial statement should be prepared to present financial position of the entity for general public not only for the management.

Financial statement should be presented to **ensure compatibility** both with the entity financial statement with the previous period and with the financial statement of other entities.

General Purpose Accounting Statement (GPAS) Prepared and presented under the **accrual basis** . Accrual basis means, a basis of accounting under which transaction and other events are recognized when they occur other than the payment release ore income receive.

SLPSAS applicable for all public sector entities except Government Business Enterprises (GBEs)

When preparing Financial Statements, management shall make an assessment of an entity's **ability to continue as a going concern**.

Components of Financial Statement

Statement of Financial Position

Statement of Financial Performance

Statement of Changers in net assets/ equity

Cash Flow Statement

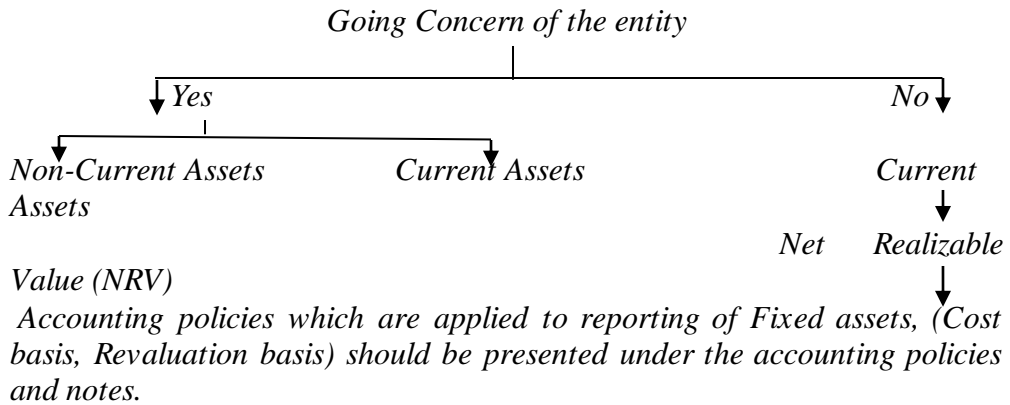
Budget Comparison

### **Accounting policies and notes**

Concept of the SLPSAS -1 is important to identify the background of the SLPSAS -7. This means, when presentation financial statement, purchase price/ Revaluation amount of the property plant and equipment, it should be presented with depiction and balance life time of the property ability to



identify general public. Reporting policies of the fixed assets in Financial Statement should ensure compatibly with the previous years and other entities (Eg. Policy of depreciation etc). Value of assets depend on it future lifetime. Therefore going concern assumption is very important to valuer when revaluation the Fixed assets.



SLPSAS 4 -Borrowing Cost

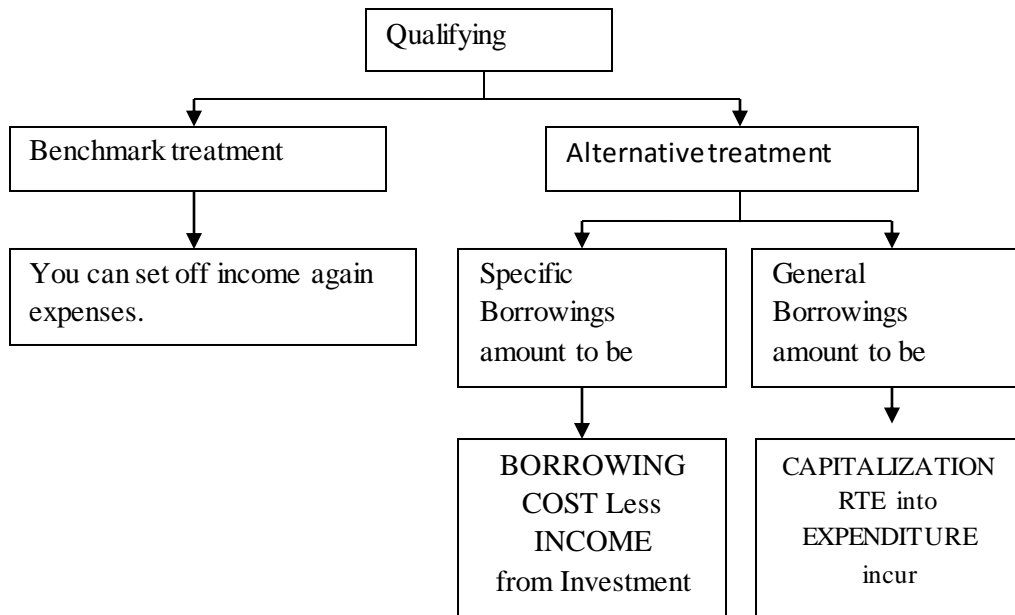
This Standard applies to all public sector entities other than Government business enterprises. According to this standard borrowing cost generally require the immediate expensing. However, the standard permits, **as an allowed alternative treatment, the capitalization of borrowing cost that are directly attributable to the acquisition, construction or production of qualifying assets.** Qualifying assets are the assets which necessarily takes a substantial period of time to get ready for its intended use or sale.

Borrowing cost include

- Interest in overdraft, short term loan, Long term loan
- Amortization of discount or premium
- Amortization of ancillary cost
- Finance charge in connection with lease
- Exchange rate difference arising from foreign currency borrowing.

According to this standard qualifying assets are

- Construction to be used for operation
- Inventories that need substantial time to bring them to their salable condition
- Manufacturing plants
- Power generation facilities
- Investment properties.



According to the SLPSAS 4 of Borrowing Cost, government entity can capitalize borrowing cost. Therefore asset value in the financial statement represent higher amount than the revaluation of current market value. For example, if the fixed assets value in financial statement is maintained on the accounting policy of cost basis of the Road Development Authority, cost of borrowing of foreign loan received for Expressway project can be capitalized.

SLPSAS 7 -Property Plant & Equipment

According to this standard applies to all public sector entities other than the Government Business Enterprises (BEP), such as; commercial corporations and government owned companies. Therefore relevant institutions are,

- Universities
- Statutory bodies ( Gov. corporations, boards, Authorities)
- Local Authorities
- Foreign funded projects
- Central and provincial government Departments and ministries.

**Property plants and equipments**

Property plants and equipments are tangible items that:  
 Are held for use in the production or supply of goods or services, for rental to others or for administrative purpose; and  
 Are expected to be used during more than one reporting period

## **Assets**

Are resources controls by an entity as a result of past events and from which future economic benefits or service potential are expected to flow to the entity.

### **Application of standard**

This standard applies to Property Plant and Equipment including:

Specialized military equipments and

Infrastructure assets ( Five year transitional period)

This standard does not applies to

Biological assets related to agricultural activity

Mineral right and mineral resources such as oil, natural gas and similar non-generative resources.

## **Heritage assets**

This Standard does not require an entity to recognize heritage assets that would otherwise meet the definition of, and recognition criteria for, property, plant and equipment. **If an entity does recognize heritage assets, it must apply the disclosure requirements of this standard and may, but is not required to, apply the measurement requirements of this Standard.**

Some assets are described as heritage assets because of their **cultural, environmental or historical significance**. Examples of heritage assets include historical buildings and monuments, archaeological sites, conservation areas and nature reserves, and works of art. Certain characteristics, including the following, are often displayed by heritage assets (although these characteristics are not exclusive to such assets):

Their value in cultural, environmental, educational and historical terms is unlikely to be fully reflected in a financial value based purely on a market price;

Legal and/or statutory obligations may impose prohibitions or severe restrictions on disposal by sale;

They are often irreplaceable and their value may increase over time even if their physical condition deteriorates; and It may be difficult to estimate their useful lives, which in some cases could be several hundred years.

Public sector entities may have large holdings of heritage assets that have been acquired over many years and by various means, including purchase, donation, bequest and sequestration. These assets are rarely held for their

ability to generate cash inflows, and there may be legal or social obstacles to using them for such purposes.

Some heritage assets have service potential other than their heritage value, for example, an historic building being used for office accommodation. In these cases, they may be recognized and measured on the same basis as other items of property, plant and equipment. For other heritage assets, their service potential is limited to their heritage characteristics, for example, monuments and ruins. The existence of alternative service potential can affect the choice of measurement base.

The disclosure requirements in paragraphs 86 to 92 require entities to make disclosures about recognized assets. **Therefore, entities that recognize heritage assets are required to disclose in respect of those assets such matters as, for example:**

- The measurement basis used;
- The depreciation method used, if any;
- The gross carrying amount;
- The accumulated depreciation at the end of the period, if any; and
- A reconciliation of the carrying amount at the beginning and end of the period showing certain components thereof.

### **Infrastructure Assets**

Some assets are commonly described as infrastructure assets. While there is no universally accepted definition of infrastructure assets, these assets usually display some or all of the following characteristics.

- They are part of the system or network;
- They are specialized in nature and do not have alternative uses;
- They are immovable; and
- They may be subject to constraints on disposal.

Although ownership of infrastructure assets is not confined to entities in the public sector, significant infrastructure assets are frequently found in the public sector. Infrastructure assets meet the definition of property, plant and equipment and should be accounted for in accordance with this standard. Examples of infrastructure assets include road networks, sewer systems, water and power supply system and communication networks.

### Initial cost

Items of property, plant and equipment may be required for safety or environmental reasons. The acquisition of such property, plant and

equipment, although not directly increasing the future economic benefits or service potential of any particular existing item of property, plant and equipment, may be necessary for an entity to obtain the future economic

Recognition Criteria of PPE

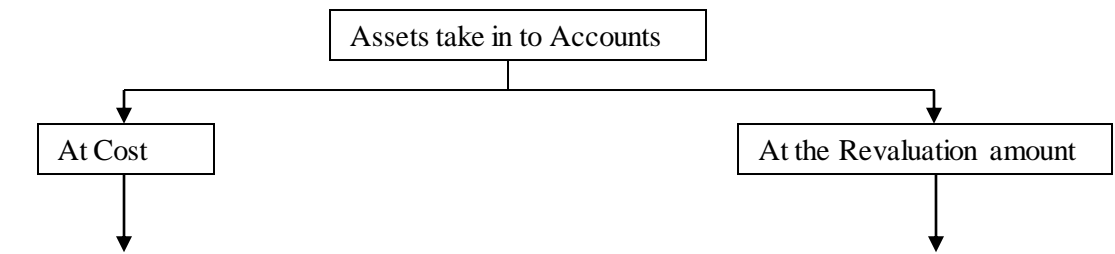
The cost of an item of PPE shall be recognized as an asset if, and only if:  
 It is probable that future economic benefits or service potential associated with the item will flow to the entity and  
 The cost or fair value of the item can be measured reliably.

Measurement of recognition

An item of PPE that qualifies for recognition of asset shall be measured at its cost. **Where an asset is acquired through a non-exchange transaction, its cost shall be measured at the fair value as at the date of acquisition.**

Measurement after recognition

An entity shall use either cost model or the revaluation model as its accounting policy and *shall apply that policy to an entire class* of Property Plant and equipment.



**Initial Recognition amount reported by**  
 Purchase price after discount  
 +

**Custom Duty +Tax + Transport + Installation**

And all expenses up to workable condition

**Revaluation**  
**Government Chief Valuer**

Accountant can decide the applicable model of take assets in to accounts. It may be cost model or Revaluation model as above. However applicable model can be change year to year and if there is any changes it should be disclose. Accrual method accounting using SLPSAS initiate from year 2012. Therefore all state assets are being valued by the Chief Government Valuer according to instruction given by the Department of State Account, Ministry of Finance and planning.

### Cost Model

After recognition of an asset, an property Plants and Equipments **shall be carried at its cost** less any accumulated depreciation and any accumulated impairment losses.

### Revaluation Model

After recognition of asset, an item of PPE whose fair value can be measured reliably shall be carried at revalued amount, **being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses.**

### Issues in Revaluation

When apply revaluation model following issues can be arises,  
Market-base evidence are not available, Ex. Market evidence for public property can not be available  
Absence of Market Transactions for comparisons  
No active or Liquid market- generally property market is less liquid and it is not active market  
When differs materially from its carrying value  
Entire class of PPE to be valued  
Increase and decrease in valuation

### Depreciation

Depreciable amount of an assets shall be allocated on a **systematic basis over its useful life**. After revaluation of PPE, subsequent accumulated depreciation or subsequent accumulated impairment losses should be deducted. ***Therefore, remaining useful time of the assets should be reported with the revaluation amount.***

The residual value and useful life of an assets shall be reviewed at least at each annual reporting date and, if expectation differ from previous estimates, the changes shall be accounted.

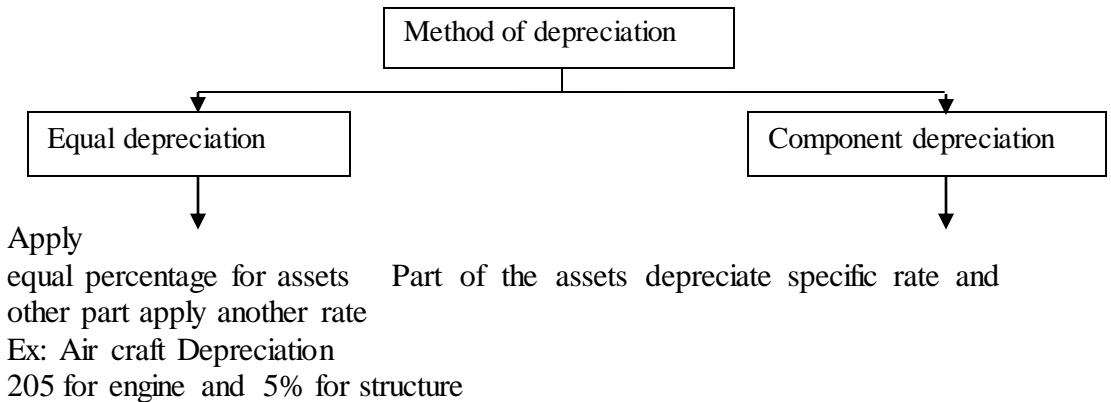
### Issues in Depreciations

If fair value exceeds the its carrying value. Then assets useful life should be reassessed.  
Residual value is immaterial in the calculation  
When residual value is more. Depreciation charge is zero.  
Depreciation of an asset ceases when it is derecognized

### Depreciation Method

The depreciation method shall reflect the pattern in which the asset's future economic benefits or service potential is expected to be consumed by the

entity. The method applied to an asset shall be reviewed at least at each annual reporting date and if there has been a significant change in the expected pattern of consumption of the future economic benefits or service potential embodied in the asset, the method shall be changed to reflect the changed pattern.



**Valuation Standards and State asters Valuation**

RICS Valuation standards, International Valuation Standards (IVS) and Sri Lanka Valuation Standards (SLVS) relating to the Assets valuation are basis to the Assets valuation for financial reporting. RICS valuation Standards and Sri Lanka Valuation Standard are the applied standards in Sri Lanka.

Assets used for the purpose of generating revenue of enterprise, which are generally known as operational or performing assets, should be valued on the basis of existing use. Assets which are idle or not generating any revenue which are known as non-operational or non performing assets should be valued on the basis of highest and best use.

According to the Sri Lanka Financial reporting Standards (SLFRS) and International Financial reporting Standard (IFRS) specifically mention that, assets should be valued under the concept of Fair Value. The market value referred to in this standard is compatible with ‘Fair value’ defined in Sri Lanka Accounting Standard.

**Fair value**

The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date’ (SLFRS -13)

‘The estimated price for the transfer of an asset or liability between identified knowledgeable willing parties that reflects the respective interest of those parties’ (IVSC)

### **Market Value**

The Estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and willing seller in an arm’s length transaction after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion. (RICS ,2012)

### **Specialized and Non specialized properties**

The type of property that would be referred to as specialized are those properties where there is insufficient market data to value them by some form of comparisons. Generally most of the state properties are specialized property. For example,

Telecommunications

Leisure properties such as play ground and parks

Hospital

Schools

Infrastructure such as road network, water canals and reservoirs.

The type of property that would be referred to as non specialized are the dominant property types of residential, office, shops, industrial units and warehousing. These will be valued by either the investment or comparative methods or in some markets by the replacement cost approach.

### **Method/s of approach to the Fair Value**

When the assets are valued for accounting purpose, property should be valued *as it is*. Methods adopted for approach to value *as it is* are as follow,  
Comparison method

Most type of property where there is good evidence of previous sales. Therefore these evidence can be compare with subject property valuation. This method can be only applied for non specialized property. State properties are specialized in nature therefore application of this method is limited.

Investment/Income method

Used for most commercial and residential property that is producing, or has the potential to produce future cash flows through the lending of the property. This method can be applied for non specialized property. However state property cannot be identified as income generation property and application of this method is limited to state assets valuation.



#### Accounts/ profit method

Used for trading properties where evidence of rent is slight as they tend not to be held as investments. Mostly this method is applied for specialized property. This method is also not applied for state property because there are not trading properties.

#### Development/ Residual method

Used for properties ripe for development or redevelopment or for bare land only. Determine the value of development considering highest and best use. This method can be applied for specialized and non specialized properties.

#### Contractor's/ Cost method

Used for only those properties not bought and sold on the market and for technical (Account or statutory) purpose only. Most of the state properties are valued using this method because state properties are specialized property.

### **Conclusion**

Valuation of State assets for financial reporting purpose should be conducted according to the standards which are publish specially for Public sector called Public Sector Accounting Standards, International Financial reporting standards, Sri Lanka Accounting Standard as well as International Valuation standards and Sri Lanka Valuation Standards. This article gives an introduction of these standards, specially Public Sector Accounting Standard and application of other standards to the state assets valuation for financial reporting purpose.

### **References**

- The Institute of Chartered Accountants of Sri Lanka & Ministry of finance and planning (2012) *Sri Lanka Public Sector Accounting Standards*, Volume ii, Colombo: Sri Lanka.
- The Institute of Chartered Accountants of Sri Lanka & Ministry of finance and planning (2009) *Sri Lanka Public Sector Accounting Standards*, Volume i, Colombo: Sri Lanka.
- Royal Institute of Chartered Survey (2012), *Professional Valuation Standard*, United Kingdom.
- French N (2012), *The Valuation of Specialized property: A review of Valuation methods*, England.
- CPA Australia Ltd.(2012), *Guide to Valuation and depreciation under the international Accounting Standard for the public sector*, Australia.

- French M, *The Valuation of Specialized Property: A review of Valuation Methods*, England.
- CPA Australia Ltd. (2012), *Guide to Valuation and depreciation under the international Accounting Standards for the public sector*, Australia.

## **Municipal Solid Waste Management (MSWM) in Sri Lanka**

**H M L P Karunarathne<sup>1</sup>**

<sup>1</sup>Lecturer, Department of Estate Management and Valuation,  
University of Sri Jayewardenepura, Sri Lanka

[lakshikarunarathne@sjp.ac.lk](mailto:lakshikarunarathne@sjp.ac.lk)

### **Introduction**

Solid waste is a popular hot topic in the most of the countries; Sri Lanka is also having so many discussions on this topic. Accordingly, waste collection and disposal is a serious problem in most of the urban areas in Sri Lanka especially Colombo, Kandy are the best examples. Generally solid waste is considered as an 'urban' issue (Hornweg and Tata, 2012). Solid Waste or municipal solid waste, according to Medina (2000) describe as materials generated from the result of human daily activities such as places like households, public places and city streets, shops, offices and hospitals. At present, higher percentage of people lives in the cities and the rate of urbanization is also increasing rapidly. This will increase the challenges to waste disposal.

Further, waste is defined as any unwanted material intentionally thrown away for disposal. Solid waste generators can be categorized in to eight: residential, industrial, commercial, institutional, construction and demolition, municipal services, process, and agricultural (Schübeler, 1996). Solid waste is the most visible and pernicious by-product of a resource-intensive, consumer-based economic lifestyle (Hornweg and Tata, 2012). Accordingly, waste is a pressing environmental, social and economic issue. Increasing population, consumption and developing economy endure to generate large amounts of waste which needs more effort to reduce and prevent it. Even though, waste considered as disposable in the past, today it is recognized as a resource. Therefore, in general terms:

***'WASTE is a valuable resource at a wrong place, in a wrong form or in a wrong medium'***

### **Municipal Solid Waste**

"Municipal solid waste" (MSW) is a term usually applied to a heterogeneous collection of wastes produced in urban areas, the nature of which varies from region to region (UNEP, 2005). MSWM refers to the collection, transfer, treatment, recycling, resource recovery and disposal of solid waste in urban areas (Schübeler, 1996). Further, urban wastes can be categorized into two major components: organic and inorganic. The organic components of urban solid waste can be identified under three broad

categories: putrescible, fermentable, and non-fermentable. Putrescible wastes tend to decompose rapidly and unless carefully controlled, decompose with the production of objectionable odors and visual unpleasantness. Fermentable wastes tend to decompose rapidly, but without the unpleasant accompaniments of putrefaction. Non-fermentable wastes tend to resist decomposition and, therefore, break down very slowly. A major source of putrescible waste is food preparation and consumption. As such, its nature varies with lifestyle, standard of living, and seasonality of foods. Fermentable wastes are typified by crop and market debris (UNEP, 2005). MSWM is the most important service a council provides. Accordingly, most of the low-income countries as well as middle-income countries, MSW is the largest single budget item. Accordingly, solid waste is usually the one service that falls completely within the local government's purview (Hoorweg and Tata, 2012). There, MSW includes wastes generated from residential, commercial, industrial, institutional, construction, demolition, process, and municipal services. Some studies, only consider residential waste as MSW, and in high income countries, only 25 percent to 35 percent of the overall waste stream is from residential sources (The World Bank, 1999, as cited in Schübeler, 1996).

### **Why Need to Manage Municipal Waste?**

Since economic growth is measured as a sustained increase in production output and expenditure, as a result of that waste generation volume is also increased along with economic growth in the past half-century (Giusti, 2009 as cited in Ai, 2011). The environmental impacts of MSW are associated with not only its enormous volume but also its toxicity. Although MSW are generally considered non-hazardous wastes, toxic materials in the MSW such as batteries, paints, inks, lamps, and fabrics, are common. The percentage of toxic materials in the MSW has increased in the past decades after synthetic materials became widely manufactured, consumed, and discarded (Geiser, 2002).

As mentioned above, waste generation increases with population expansion and economic development. Improperly managed solid waste poses a risk to human health and the environment. Uncontrolled dumping and improper waste handling causes a variety of problems, including contaminating water, attracting insects and rodents, and increasing flooding due to blocked of drainage canals or gullies. In addition, it may result in safety hazards from fires or explosions and also increases greenhouse gas (GHG) emissions, which contribute to climate change (USEPA, 2002). The generation of waste is primarily an urban phenomenon, and the high rate of urbanization will continue to pose a growing challenge to the local authorities who are

responsible for the collection and disposal of waste. Current developments such as the use of polythene and other non-degradable packaging material, the discarding of growing quantities of used electrical and electronic equipment, the increasing discharge of clinical waste, and the entry into the country of e-waste in the guise of resources are factors that have collectively added to the difficulties in resolving the problem of waste management. Many forms of waste (e.g. discarded electronic equipment and clinical waste) are potentially hazardous. The indiscriminate dumping of hazardous material with other solid waste can pose a threat to those who engage in handling and picking waste while also exposing the people living in the area to a variety of communicable diseases (National Council for Sustainable Development, 2009).

Further, especially in Sri Lanka, solid wastes are collected and disposed in mixed state and being dumped in places like road sides, marshy lands, low lying areas, public places, forest and wild life areas, wet lands, water courses etc... (Karadiyana, Manampitiya, Bloemendhal, Gohagoda waste dumping sites, etc...) It leads to various harmful environmental impacts such as ground and surface water pollution, air, visual/aesthetic pollution. Further, these places are ideal for breeding of disease vectors such as mosquitoes. However, as a developing middle income country needs to move towards sustainable livable city concept. Where, sustainability consists with a long-term commitment of economic prosperity, community well-being and environmental integrity. In this context 'solid waste management' is an unavoidable topic in the present world.

## **Methods of Municipal Solid Waste Management**

### **Integrated Solid Waste Management (ISWM)**

Integrated Solid Waste Management (ISWM) is a comprehensive waste prevention, recycling, composting, and disposal system. An effective ISWM system considers how to prevent, recycle, and manage solid waste in ways that most effectively protect human health and the environment. ISWM involves evaluating local needs and conditions, and then selecting and combining the most appropriate waste management activities for those conditions. The major ISWM activities are waste prevention, recycling and composting, and combustion and disposal in properly designed, constructed, and managed landfills (USEPA, 2002).

Further, Integrated Waste Management (IWM) is an approach that is most compatible with an environmentally sustainable development. It refers to the complementary use of a variety of practices to safely and effectively handle municipal solid waste. The strategy used to develop an integrated waste

management system is to identify the levels at which the highest values of individual and collective materials can be recovered. The most favorable is reduction, which suggests using less to begin with and reusing more, thereby saving material production, resource cost, and energy. The least desirable is landfilling. The approach not only aims at maximizing recovery of reusable and recyclable materials, but also reduces pollution and protects human health and the environment (USEPA, 1995). Accordingly, three main categories under IWM as follow (See Figure 01),

**Waste Prevention** – also called “source reduction”, preventing waste from being generated. Waste prevention strategies include using less packaging, designing products to last longer, and reusing products and materials. Waste prevention helps reduce handling, treatment, and disposal costs and ultimately reduces the generation of methane (USEPA, 2002).

**Recycling and Composting** - Recycling is a process that involves collecting, reprocessing, and /or recovering certain waste materials (e.g., glass, metal, plastics, paper) to make new materials or products. Composting is considered as the conversion of waste materials into soil additives. Recycling and composting generate many environmental and economic benefits. For example, they create jobs and income, supply valuable raw materials to industry, produce soil-enhancing compost, and reduce greenhouse gas emissions and the number of landfills and combustion facilities (USEPA, 2002).

**Disposal (landfilling and combustion)** – These activities are used to manage waste that cannot be prevented or recycled. One way to dispose of waste is to place it in properly designed, constructed, and managed landfills, where it is safely contained. Another way to handle this waste is through combustion. Combustion is the controlled burning of waste, which helps reduce its volume. If the technology is available, properly designed, constructed, and managed landfills can be used to generate energy by recovering methane. Similarly, combustion facilities produce steam and water as a byproduct that can be used to generate energy (USEPA, 2002).

**Figure 01 – Integrated Solid Waste Management**



Source: USEPA, (2002)

**The Solid Waste Management Hierarchy**

The purpose of the waste management hierarchy is to make waste management practices as environmentally sound as possible. The waste management hierarchy has been adopted in various forms by most industrialized countries. The hierarchy is a useful policy tool for conserving resources, for dealing with landfill shortages, for minimizing air and water pollution, and for protecting public health and safety. In many developing countries, some aspects of this hierarchy are already in place, since traditional practices revolving around waste prevention reuse, and recycling are established (UNEP, 2005).

Following aspects are coming under Waste Hierarchy (See Figure 02),

Reduce the toxicity or negative impacts of the waste that is generated.

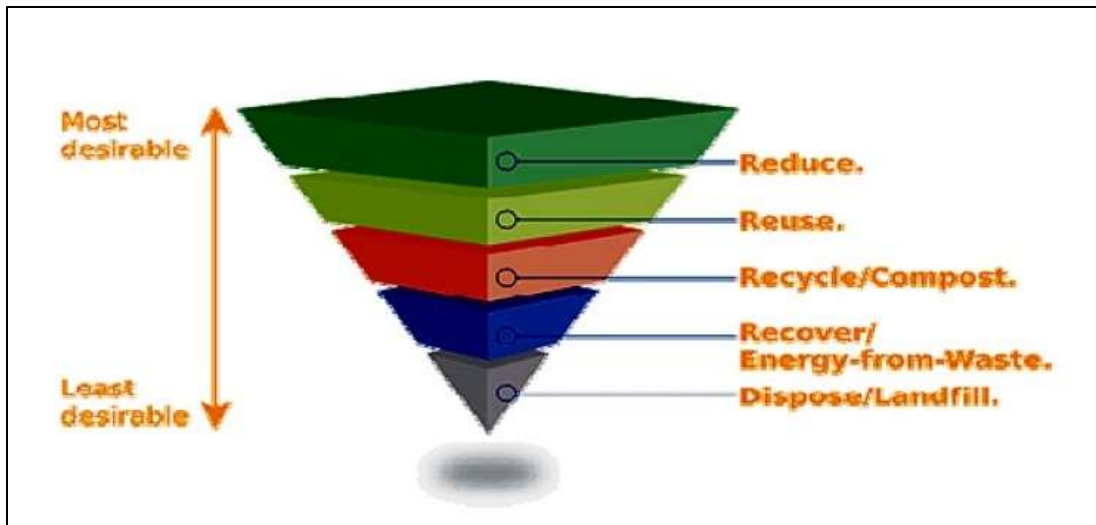
Reuse the materials recovered from the waste stream.

Recycle, compost, or recover materials for use as direct or indirect inputs to new products.

Recover energy by incineration, anaerobic digestion, or similar processes.

Reduce the volume of waste prior to disposal.

Dispose of residual solid waste in an environmentally sound manner, generally in landfills (UNEP, 2005)

**Figure 02 - The Solid Waste Management Hierarchy****3R Concept**

According to the USEPA, (2002), for a sound environmental management is achieved when the 3R concept is implemented according to its order. The concept refers to Reduce, Reuse and Recycle. The concept emphasizes on an increase in the ratio of recyclable materials, use of raw materials and manufacturing waste as well as an overall reduction in the resources and energy used.

**Reduce can be achieved by the following measures**

Reducing the amount of raw materials and energy used per product by changing the design of the product or changing the production process

Reducing the quantity of production by extending the life of products or improving repair and maintenance technologies;

Reducing the amount of disposed waste by reducing the volume of waste or by selecting recyclable raw materials.

**Reuse can refer to the following measures**

Repeatedly using products after washing or other proper measures (reusable cups, returnable bottles, used clothing, etc.);

Reusing parts derived from dismantled used products.

**Recycle is** to use all or a part of a used product as a raw material in the same or other products by shredding, recovery of valuable materials or other proper measures.



### **Strategic Aspects of Solid Waste Management**

To achieve sustainable and effective MSWM following aspects need to be regard of political, institutional, social, financial, economic and technical aspects (Schübeler, 1996).

**Political aspects concern** the formulation of goals and priorities, determination of roles and jurisdiction, and the legal and regulatory framework.

**Institutional aspects** concern the distribution of functions and responsibilities and correspond to organizational structures, procedures, methods, institutional capacities and private sector involvement.

**Social aspects of MSWM** include the patterns of waste generation and handling of households and other users, community-based waste management and the social conditions of waste workers.

**Financial aspects** of MSWM concern budgeting and cost accounting, capital investment, cost recovery and cost reduction.

**Economic aspects** of MSWM are concerned with the impact of services on economic activities, cost-effectiveness of MSWM systems, macro-economic dimensions of resource use and conservation, and income generation.

**Technical aspects** of MSWM are concerned with the planning and implementation and maintenance of collection and transfer systems, waste recovery, final disposal and hazardous waste management.

### **MSWM in Sri Lanka**

In Sri Lanka, urban areas is identified as Municipal council (MC) and Urban council (UC) areas, accordingly there are 23 and 41 MCs and UCs respectively. Waste collection and disposal is happening in all the above MCs and UCs. It is estimated that over 6400 tons/day of solid waste are generated in Sri Lanka (Visvanathan, 2006). The most common practice in almost all municipalities in Sri Lanka are open burning, land filling (not technical) and open dumping of wastes. These methods are not considered as environmental friendly. About 85 % of collected waste in Sri Lanka is subjected to open dumping (Visvanathan, 2006). Further, there are very good SWM system has been established in most of the councils in Sri Lanka. However, operation, maintenance, monitoring and evaluations are not properly implementing by these local authorities which leads for so many solid waste issues in urban areas of Sri Lanka. Further, today SWM issues are become a major environmental problem and also a national issue.

**Important Laws and Regulations related to SWM in Sri Lanka**

One of the important laws and regulations with regard to solid waste is the National Environmental Act No 47 of 1980, which restricts the emission of waste materials into the environment and states the responsibilities and powers of the Central Environmental Authority (CEA) and further, National Environmental (Amendment) Act, No. 56 of 1988 and National Environmental (Amendment) Act, No. 53 of 2000 have amended the sections in main act giving more concern towards the waste. And also, the Gazette No. 1466/5 ordered regulation for the materials coming under polythene or polythene products.

In addition to those, special regulation, No 1627/19 (2009) made by the Minister of Environment and Natural Resources under Paragraph (h) of Sub-section (2) of Section 32 (2) (h) of the National Environmental Act, No. 47 of 1980 especially talk about the Municipal Solid Waste (Please see the Attachment 01).

Further, Pradeshiya Sabha Act No.15 of 1987, Urban Council No.61 of 1939 and Municipal Council Ordinance No. 16 of 1947 are also important regulations in SWM. These Acts and Ordinances state that the local authorities are responsible for proper removal of non-industrial solid waste and for providing suitable dumpsites.

Further, Ministry of Environment prepared the National Strategy for Solid Waste Management in 2000, which recognized the need for SWM from generation to final disposal through a range of strategies, based on the 3-R principal. This was superseded by a National Policy for Solid Waste Management prepared in 2007 “to ensure integrated, economically feasible and environmentally sound SWM practices for the country at national, provincial and local authority level”. Policy objectives are,

To ensure environmental accountability and social responsibility of all waste generators, waste, managers and service providers

To actively involve individuals and all institutions in integrated and environmentally sound SWM practices

To maximize resource recovery with a view to minimizing the amount of waste from disposal

To minimize adverse environmental impacts due to waste disposal to ensure health and well-being of the people and on eco-system

Further, a major activity that bounded from the National Policy is the setting up of the Pilisaru Programme in 2008 to solve the solid waste problem at the national level, the CEA, with the concept of reusing the resources available

in the collected garbage to the maximum before final disposal. While technical and financial assistance on SWM to the local authorities is a major role of Pilisaru, it is also empowered to take legal action against those local authorities that are not managing their solid waste properly. Pilisaru is a successful Integrated Urban Planning Approach to Solid Waste Management in Sri Lanka. Ministry of Environment & Natural Resources of Sri Lanka has launched a national level solid waste management programme with the participation of other government organizations, specially Urban Development Authority private Institutions, NGOs & experts in this field (Dasanayaka, 2009). There are five main objectives in the Pilisaru Program,

- Development of a National Policy on Solid Waste Management
- Development of a National Strategy on SWM
- Effective education & awareness for all stakeholders on SWM including training & capacity building
- Facilitation for LAs for implementation of SWM projects / programs
- Legal reforms to strengthen effective law enforcement

These objectives are formulated considering the existing solid waste related problems and issues faced by the stakeholders and to improve the overall solid waste management system in the country, emphasizing particularly the crucial issues such as intermediate treatments and environmentally friendly final disposal of residues (Dasanayaka, 2009; Franado, n.d).

Further, according to the Haritha Lanka Program, under mission 06, it's talk about "Doing Away with the Dumps". In the industrial context, the production of waste can be reduced considerably through "life cycle management" where minimizing the generation and reducing the toxicity of waste is factored into the designing, manufacturing, consumption and disposal of a product. Additionally, the "polluter pays principle" should also be enforced to ensure environmentally sound treatment and disposal of industrial solid waste. The accumulation of hazardous wastes in the non-hazardous waste stream has to be avoided and the management of hazardous waste improved. Local Authorities need to strengthen their institutional mechanisms for solid waste management. New initiatives are needed – obtaining community participation; segregating waste at the source and setting up mechanisms to deal with the different categories of waste; and integrating collection sites, storage sites, and landfill sites. A range of actions are proposed for dealing with the waste management issues and doing away with the dumps such as Promote Life Cycle management of waste, strengthen the institutional mechanism for solid waste management in every Local Authority, establish necessary infrastructure for solid waste management in each Local Authority or adopt appropriate alternative

methods, prevent accumulation of Hazardous Wastes in to the non-hazardous wastes streams, apply 'Polluter Pay Principle' and environmentally sound treatment and disposal of industrial solid waste and apply 'zero waste' concepts in agricultural farms (National Council for Sustainable Development, 2009). Moreover, under the Mission 8: Green Cities for Health and Prosperity, one of the mission which is introduce state-of-the-art integrated solid waste management and hazardous waste management for all urban areas (National Council for Sustainable Development, 2009).

### **Problems of MSWM in Sri Lanka**

One of the main issues in Sri Lanka is national level strategy on SWM, provincial level policies and strategies are not adequately harmonized with the needs and capabilities of the local governments. And also, current conventional approach of solid waste management system is more concern on collection and disposal, disregards on reuse and reduction. This approach does not encourage the residents for an obligatory social partnership with the MSWM. There general attitude of the public is 'We dump – They collect' and SWM is considered as a sole responsibility of municipality. Further, one of the main issues of Sri Lankan context is mixed state solid wastes dumping which lead the problem of separating, reusing and recycling the wastes. Additionally, more focused on SWM in Sri Lanka is given for the land filling but it should be the last option of SWM but as easy option this has become the conventional approach in Sri Lanka. In addition to this, lacks of financial & human resources in councils increase solid waste issues and lead towards the ineffective management, because still Sri Lanka, national to local level, priority is not given for the SWM. Further, officers engaged in SWM have no enough training and knowledge in SWM. Accordingly, most of the Local Authorities have no inbuilt capacity to formulate, establish and run proper waste management plants due to lack of infrastructure facilities such as machinery, equipment, professional staff and skilled labor. Moreover, sufficient funds are not available for operations relating to separation, composting, recycling and disposal as well.

So it can be understood very clearly that though there are good policy frames as discussed in the above section. Still issues remain because the implementation and monitoring of those waste management actions are not efficiently and effectively functioning. Still Sri Lankans, top to grass root level are not aware about why we actually need to manage waste. Therefore, Sri Lankans need an attitudinal change. Further, though there are awareness programs, it is essential to think, to what extent they are inculcated in people's minds and hearts. 'Pilisaru Project' is one of the best examples in

Sri Lanka. But, still it is not widely spread and implemented effectively and efficiently around Sri Lanka as expected.

### **Recommendations for the MSWM in Sri Lanka**

At the present, solid waste management depends solely on collection and disposal method. These conventional methods need to be changed and should promote alternative techniques such as reduce, reuse and recycle the waste. And also, Sri Lankans' the most popular and the easiest method of disposal; land fill technique must be the last option.

Proper financial support should be given for the SWM to improve the infrastructure facilities, such as operating new equipment, technologies, training the staff and implementing awareness programs so on.

Eradication of conventional mixed waste disposal. Developing the mechanism to separate waste at the source of generation and collecting those separated waste by local authorities without mixing them.

Public education and participation is an important aspect in the context of current socio-economic pressures and complexities. It also envisages creating institutional methods to engage the city residents in municipal planning and decision making. Social awareness programs for home-level waste reduction, reuse and composting are also needed. Urban waste management will be easier and more effective only if the local authority can develop institutional mechanisms to promote sustainable partnerships with different stakeholders of the city such as the residents, civil society organizations and the private sector.

Proper record keeping methods are needed. Currently, councils do not provide vital information required by the administrators and planners to understand the ward-specific, lane-specific quality and quantity of generated waste. It does not even provide leading information to plan the cadre and vehicle deployment effectively. Hardly any records exist that can indicate the types and volumes of different waste to help planners determine the different recycling modes and processes that can be used.

Further, councils can collaborate with the Department of Education, the Central Environment Authority, Universities, other related agencies and NGOs, to conduct city wide public education activities to raise the environmental awareness levels of the public and the city residents in order to obtain their cooperation to implement the SWM Strategies, for doing researches in this context.

Need human resources and also technical knowledge in LAs to coordinate both consumers and producers to promote the use of sustainable consumption and production through 3R and 5R and other SWM techniques. Develop alternative approaches like 'Waste to Energy' ensuring that these facilities are designed to maximize the environmental, financial and social benefits (Ex. Singapore waste to energy system)

At the end, solid waste management should be an adaptive management approach with monitoring, identifying challenges and finding solutions to overcome those challenges. Accordingly, responsible parties should continue to adapt and evolve their solid waste management operations and infrastructure and create more resilient and adaptable systems. Further, as one of the main problems, a country like Sri Lanka facing is funding for these activities (Development of infrastructures) and failure to pay adequate attention for solid waste management. In this regards, mechanism should be developed for funding these activities such as main focus should be given to public and private sector participation. One of the best examples is 'Singapore Waste to Energy Approach' where government collaborates with private companies.

### Reference

- Ai, N. (2011). Challenges of Sustainable Urban Planning: The Case of Municipal Solid Waste Management, School of City and Regional Planning, Georgia Institute of Technology.
- Dasanayaka, M. (2009). Successful Intergraded Urban Planning Approach to Solid Waste Management in Sri Lanka, Central Environment Authority
- Franado, J. (n.d). National 'Pilisaru' Waste Management Program
- Geiser, K. (2002). Source Reduction: Quantity and Toxicity Part 6B: Toxicity Reduction. In Handbook of Solid Waste Management (2nd Edition), edited by George Tchobanoglous and Frank Kreith. New York: McGraw-Hill Companies, Inc.
- Hoornweg, D. & Bhada-Tata, P. (2012). What a Waste: A Global Review of Solid Waste Management, The World Bank
- Medina M. (2000) Globalization, Development, and Municipal Solid Waste Management in Municipal Council Ordinance No. 16 of 1947
- National Council for Sustainable Development, (2009). National Action Plan for Haritha Lanka Program, National Council of Sustainable Development.

- National Environmental Act No 47 of 1980, Government of Sri Lanka
- National Environmental (Amendment) Act, No. 56 of 1988, Government of Sri Lanka
- National Environmental (Amendment) Act, No. 53 of 2000, Government of Sri Lanka
- The Gazett No. 1466/5, (2006), Ministry of Environment and Natural Resources
- The Gazett No 1627/19 (2009), Ministry of Environment and Natural Resources
- Schübeler, P. (1996). Conceptual Framework for Solid Waste Management in Low Income Countries, SKAT (Swiss Centre for Development Cooperation in Technology and Management)
- UNEP, (2005). Solid Waste Management (Volume II: Regional Overviews and Information Sources), CalRecovery, Inc. and UNEP International Environmental Technology Centre (IETC)
- Urban Council No.61 of 1939, Government of Sri Lanka
- USEPA, (1995) Decision Maker's Guide to Solid Waste Management, Volume II, (EPA 530-R-95-023), Washington DC
- USEPA, (2002). Solid Waste Management: A Local Management with Global Impact
- Visvanathan, C. (2006). "Domestic solid waste management in South Asia" 3 R South Asia Expert Workshop, Kathmandu, Nepal.
- White P.R, Franke M & Hindle P, (1999) Solid Waste Management: A Lifecycle Inventory, An Aspen Publication.

### **Attachment 01**

Special regulation, No 1627/19 (2009) made by the Minister of Environment and Natural Resources under Paragraph (h) of Sub-section (2) of Section 32 (2) (h) of the National Environmental Act, No. 47 of 1980 especially talk about the Municipal Solid Waste. Following shows the regulation, These Regulations may be cited as the National Environmental (Municipal Solid Waste) Regulations, No. 01 of 2009.

2.(1) No person shall—

(a) dump municipal solid waste along sides of any national highway ;

(b) dump solid waste at any place other than places designated for such purpose

by the relevant local authority or any person or body of persons authorized

by them in that behalf.

(2) Any person contravening the provisions of this regulation shall be guilty of an

offence punishable under Section 31 of the Act.

3. No person shall collect or cause to be collected any municipal solid waste from any designated place along the national highway, other than during the hours of 6.00 p.m. to 6.00 a.m.

Provided that the collection of domestic waste may be carried out by any person or body

of persons authorized in that behalf, from the respective households, during the hours of

6.00 a.m. to 6.00 p.m.

4. For the purpose of these regulations—

“Act” means the National Environmental Act, No. 47 of 1980 ;

“Central Environmental Authority” means the Central Environmental Authority

established under provisions of the National Environmental Act, No. 47 of 1980 ;

“designated place” means the temporary collection points as identified by the relevant

local authorities for the collection of municipal solid waste ;

“Municipal Solid Waste” includes garbage, refuse or a variety of solid material which

is in excess of, or is discarded or rejected as useless or unwanted, from human and

animal activities which originates from households, commercial establishments and

community actions, and shall not include—

waste material prescribed as Scheduled Waste by Regulation published in *Gazette Extraordinary* No. 1534/18 of February 1, 2008 ; and

waste or discharges of any industrial process, agricultural wastes and sewage sludge and source separated recyclables.

(The general components of Municipal Solid Waste are food, paper, plastics, metals, glass, street, sweepings garden or yard trimmings and miscellaneous organic and inorganic wastes).

“National Highways” shall have the same meaning as in the National Thorough fares Act, No. 40 of 2008.



**Thamara Adhikaram**

## **Public Sector Property Audit (PSPA) and Business Plan for Property Marketing and Development**

**A.Wedamulla<sup>1</sup>**

<sup>1</sup>Former Additional Director General  
Property Development Management  
Urban Development Authority, Sri Lanka  
[sena@makestuffhappen.com](mailto:sena@makestuffhappen.com)

### **1. Introduction**

With about 80% of the total land area contributing to 6,561,000 Ha. , Sri Lanka government is the largest land owner of the country. In spite of significant disposal under different colonization schemes, public sector continues to own a substantial part of land in the country. The extent of the public sector drops down to about 20% in the western region where most development activities are located. The public sector properties known as state properties are under the control of government departments, local authorities and the statutory organizations. Out of these organizations, the key organization is the Land Commissioners Department established under the provisions of the Land Development Ordinance No. 19 of 1035. The Crown Land Ordinance No.8 of 1947 can be identified as the general statute on the subject of state land that provides for the alienation, protection and administration of the crown lands. The Land Commissioner (LC) is the overall administrator. Originally the LC handled the administration of state land in the country through the Government Agents of the Districts. Subsequently Divisional Secretaries became the local administrators. Crown Land Ordinance later became the State Land Ordinance. Even though a clearly laid down management system is available in the State Land Ordinance and the connected rules and regulations to follow, there are shortcomings of implementation. Certain, Divisional Secretaries do not have proper records of the state properties available in their divisions. Non availability of trained officers with sufficient knowledge in land management is one of the reasons for this situation. Most alarming point is that certain departments, Local Authorities and statutory organizations do not have even a list of their property assets. Property records with up to date information are vital to have a proper system of management. Information is a key resource for managers and it has a considerable impact on their ability to be effective. Under the circumstances, it is very clear that the present management system need to be reviewed and real estate professionals are necessary to be employed to undertake the management of the properties owned by the largest land owner of the country.

It is not intended to have a holistic approach to present a business plan per se for property marketing and development. "Marketing is the management process responsible for identifying, anticipating and satisfying customer requirements profitably." Accordingly, the idea is to suggest a management process for marketing and development of state property assets. Presently the state property marketing is handled by a couple of agencies without any national policy and professional input. Basic need in marketing property is to identify the marketable product and make it marketable. This requires the relevant data and information about the lands selected for disposal. The purpose of conducting a Public Sector Property Audit (PSPA) is to achieve this.

## **2. Origin of State Lands**

As defined in land related enactments, the public sector property or the state land means the land to which the state is lawfully entitled or which may be disposed of by the state and includes all rights and privileges attached or appertaining to such land.

Commencing from 1840, several ordinances were enacted to declare the lands that were specified as crown under the provisions of respective enactments and those are:

Lands declared to be the property of the state under the Crown Lands (encroachments) Ordinance No 12 of 1840. This ordinance declared all lands as crown if people could not prove their ownership to such lands. Their ownership to lands they were using from generation to generation was not considered. For proving ownership of lands the British expected the public to produce deeds, grants and such other documentary evidence. Under these circumstances Sri Lankan had to forgo their ownership to thousands of acres of their lands under the Encroachment Ordinance of 1840.

Lands declared to be the property of the state under the Land Settlement Ordinance No 20 of 1931. Waste Lands Ordinance No .1 of 1897 was enacted and all uncultivated lands were declared as state lands under this law. Implementation of this law was entrusted to the Government Agents and in the year 1903 the Land Settlement Department was started for this work. In the passage of time the above ordinances were not adequate to settle the problems relating to lands and therefore the Land Settlement Ordinance No. 20 of 1931 was enacted and implemented.

Lands acquired under the provisions of Land Acquisition Act No. 9 of 1950  
Lands resumed under the provisions of Land Resumption Ordinance No.4 of 1887

Lands vested in the Land Reform Commission (LRC) under the provisions of the Land Reform Law No 1 of 1972. These lands are not considered as state lands. However these are used for different state purposes and allocated to different parties for housing and various other purposes.

### **State Property Asset types**

The property assets of the public sector are used for the provision of varied type of uses in addition to the provision of public services .Depending on the type of uses, the state assets can be divided into four categories:

- (i) Operational specialized assets
- (ii) Operational non specialized assets
- (iii) Non operational assets
  - (a) Development and investment properties
  - (b) Surplus properties
- (iv) Properties allocated to the private sector for different uses

This categorization is useful in the process of identifying state lands that can be released for development. Operational specialized assets are those used to provide specialized services such as, airports, railways, power stations, schools, hospitals etc., specialized operations cannot be relocated to release those lands for development so long as those activities are in operation. However certain developed countries have used some of their operational specialized properties for real estate development. British Rail has developed certain railway stations for shop and office uses while maintaining railway uses as well. Development of London Liverpool Railway Station is a good example. Operational non specialized assets are those used for housing, shopping, office, industrial and warehousing activities. These properties could be identified for development by relocating the present uses. There are a few factors that can be taken into consideration for selecting a property used for non specialized activity for development. A property can be abandoned or not in use, underutilized or dilapidated. The present use may be incompatible according to the development plans. Non operational assets that can be considered as surplus properties available for development. These properties may require the provision of necessary infrastructure. In addition to these types large extent of state land has been allocated to different parties for varied type of uses.

Allocation of state properties on leasehold and freehold basis was done under the provisions of the Land Development Ordinance No 19 of 1935 and the Crown Land Ordinance No 8 of 1947 to the private sector individuals and organizations for different uses. In addition Local Authorities and Statutory Organizations have allocated land for development by private developers. Some of these recipients may have not developed the land allocated to them or some have not developed fully and can be considered as underutilized. Certain parties retain their allotments without undertaking any development for years anticipating transferring to a third party and gain a profit.

### **3. Property Management**

Land or real Property is one of the prime factors in economic production and a basic resource on which all economic activity depends. Because of the importance of land and property as a resource, decisions made on the use of large extent of state property gives a considerable effect on the economic life of the nation.

In order to maintain the impact of land and property to the socio economic and environmental factors and to maximize its contribution to the country, establishment of a good system of management which is economic, efficient and effective is vital. Unlike other resources, real property has some special features such as heterogeneity of type and usage, permanency and the operations of land laws which results in the creation of a hierarchy of interests and create varied type of complications. This complexity has caused to have a good system of management with real estate professional input. Establishment of a real estate professional body to provide professional services in property management, marketing, investment, development, valuation and appraisal is an important factor to carry out proper management. The institute of Estate Management and Valuation, Sri Lanka was established in 2001 to fill the gap prevailed in the country.

If real estate management is considered broadly, three distinctly different management types can be found within the life cycle of a property. The real estate management triad, the Property Manager, Asset Manager and Portfolio manager play different roles in different stages during the period commencing from property acquisition, development, disposal or retain as an investment. While the property manager attends to primary tasks of property leasing, rent collection, lease management, property maintenance and public relations, the asset manager has broader perspective than property manager. He monitors the performance of the properties and develops the strategic plans with input from the property manager. The portfolio manager defines and implements the portfolio investment strategy based on the goals and risk/return parameters of the property portfolio. The roles of the three

managers found in highly advanced property portfolios are interrelated. In a small portfolio, all three roles are covered by one manager, say property manager.

“The traditional view of property management as no more than a mundane rent collection service practiced by dull and uninspired surveyors obsessed with the daily detail of routine maintenance and administration has no place in the 1990s. With property performance being examined ever more closely, it is no longer good enough just to ensure prompt rental payments and administrate the occasional rent review or the odd license to assign, whilst keeping expenditure on maintenance and repair to a minimum.”

“Over the next decade, there will be an increasing need for professional advice if owners and occupiers are to achieve the optimum return from their property assets. The growing complexity of statute and legislation is likely to accelerate following the establishment of European Union. Environmental issues and planning policies play an increasingly prominent role and are likely to have substantial cost implications on the use and employment of property. The growth in the sophistication of information technology and plant and machinery, combined

with the possibility of fundamental changes in working practices, will affect the underlying tradition of demand for property and emphasize of the importance of “intelligent buildings”<sup>b</sup>

The above two paragraphs were included to emphasize the position of property management in Sri Lanka even in 2010s. Our country has not reached the status to follow even the traditional practices. The policies presently followed need to be reviewed to accommodate new thinking and methods to move up from the present infancy situation of property management. . Even though the property is a main resource along with money and people, the management of property needs to go a long way. Money and people are managed by relevant professionals who are thorough with their disciplines. Property is managed even in property rich organizations by non professionals or professionals of other disciplines who do not have any knowledge in property management. Under “The Way Forward” Professor Martin Avis and others point out that “Organizations need to analyze their own requirements in relation to managing their operational property assets. This would include:

- i. understanding the organization’s overall objectives

---

<sup>b</sup> Healey & Baker Prospects for Commercial Property in the 1990s , pg 116

- ii. establishing organizational property requirements and translating these into specific objectives
- iii. determining how to achieve the property objectives
- iv. instigating a monitoring system to assess property and property management performance
- v. constructing information base to support property asset management and it's monitoring.”<sup>c</sup>

The policy makers in Sri Lanka need to follow the above to introduce new thinking and methods

#### **4. Introduction of Public Sector Property Audit**

Proper management of property requires authentic and up to date information of the property portfolio of an institution as indicated under item v mentioned above. In this regard the first step is the introduction of Public Sector Property Audit (PSPA). This is a method that can be used to list entirety of state property assets and compile information. This is an exercise to prepare an accurate data base of properties owned by different organizations of the government. Legal, physical, and location attributes of all state properties including the building and occupancy details are the basic information required. In addition the details of the services available with the running costs are important management information.

“A Land Audit or Property Review is a process by which systematic attention is given to each interest in landed property in a portfolio by a team

---

<sup>c</sup> Martin Avis, Virginia Gibson and Jenny Watts , managing operational property assets, University of Reading ,pg. iii

of qualified people working to a close brief. It is an essential first step towards attaining good management as defined by this paper.”<sup>d</sup>

“The essential components of a Land Audit are:

1. It must be supported at both the political level (in the case of local government at elected member level, and in the case of private sector organizations at main Board level) and by the professional officers and executives of the authority. In order to achieve this it is necessary to “sell” the idea to those within the organization whom it will affect, and in this connection it is important to state from the outset how the financial proceeds of disposals and cost savings are to be distributed within the organization.
2. It must cover systematically all the authority’s landed property, regardless of tenure and use, nothing should be left out; there must be no sacred cows. The analogy to a financial audit is particularly valid in this context.
2. It should cross all boundaries (geographical and departmental) because Land Audits are a corporate activity, just like financial audits, and there should not be a series of small Audits.
3. The first Land Audit should be planned using project management techniques as a single project with a defined time span which should be as short as possible. If this means that it requires additional resources these should be costed and provided for the project. If it takes too long its beneficial effect will be diluted. As a rule of thumb a small portfolio (similar to that owned by a medium-sized commercial firm) should be audited within twelve months; a medium sized portfolio (similar to that of an average District Council) should be audited in three years; and even the largest portfolios should be audited within the span of a typical rent review period which is 5 years “<sup>e</sup>

The component of the PSPA need to be prepared after studying the entire state property field and the institutions owned those assets. The

---

<sup>d</sup> The Economic ,Efficient and Effective Management of Public Authority Landed Estates ,The Surrey County Council/Kingston Polytechnic ,Joint Research Project ,1989 ,pgs 51 and 52

<sup>e</sup> Ibid pgs 52 and 53



implementation of the Audit requires the formal approval of the government to obtain the support of all property owning institutions. The activities of the PSPA should cover the entire island on the basis of Administrative Districts and Divisional Secretary areas. This is an exercise which is costly and time consuming. However it is highly important for proper planning, management, marketing and development and achieves optimum use of state property assets.

In this connection it is necessary to highlight the importance of expediting the 'Bimsaviya Programme' established to implement the provisions of the Registration of Title Act. After several years of operation, a large area of the country remains unattended. There are several advantages if entire country is covered and complete the title registration activities on priority basis. This would provide reliable information of all state and private properties and activate the property market.

### **State Property Marketing and Development**

Marketing of real property in Sri Lanka was commenced during the British period based on an organized procedure as published in the Ceylon Gazette of July 1833. The sale of crown land to capitalist investors for development of the plantation sector continued until the enactment of the Land Development Ordinance in 1935. The ordinance provided a definite policy and the procedure of systematic development and alienation of crown land to the peasant class in the rural Sri Lanka. Subsequently in 1947, the Crown Lands Ordinance was enacted to make provision to issue land grants and leases to allocate crown land both in rural and urban areas for varied uses. Under the provisions of these Acts, regulations and orders were published to indicate the detailed procedure of implementation.

While the two ordinances were remaining as instruments for alienation, utilization and development of crown land, different policy measures were introduced with opening of the economy in Sri Lanka in 1977. A couple of new enactments were introduced in the latter part of the seventies to make provision to establish a novel set of organizations with the idea to minimize the excessive bureaucratic hurdles of disposing state properties for development.

Four institutions established were assigned varied types of real estate activities including the disposal of property. The Greater Colombo Economic Commission that was later converted to the Board of Investment (BOI) carried out investment promotion activities. Development of Export Processing Zones and Industrial Estates to make land available for export

oriented industries were other prominent tasks assigned to the BOI. The Urban Development Authority . (UDA) was established to promote integrated planning and implementation of economic, social and physical development in the areas gazetted under the law. National Housing Development Authority and Sri Lanka Land Reclamation and Development Corporation are the other two organizations involved in property disposal. Apart from the policy decisions taken from time to time by the Presidential Secretariat and the Cabinet of Ministers on property matters, it is important to point out that the government did not have a national policy on state property disposal.

State properties identified for disposal throughout the country under the PSPA need to be categorized based on the suitability to local, national and international markets. Locally marketable properties can be disposed of by the institutions currently engaged in state property disposal using the available provisions with clear and transparent procedures. Local demand for land for housing, agricultural, industrial, commercial, religious and institutional uses can be met by this arrangement.

National and international real estate marketing is an expert operation. Planning, organizing and managing the national and international marketing activity require an in depth knowledge in real property and property marketing. Being an operation that has several functions, the organization involved in international marketing of property requires experienced professionals in real estate and real estate marketing. In consideration of the requirement of the expertise staff, intricacy of the operation and the size of the country, it would not be prudent to have a number of organizations to handle the task. It is very clear that the state organizations empowered to carry out real estate marketing did not act jointly under a national real estate marketing plan. These organizations had individual plans and targets without any guidance of a national policy.

Accordingly it will be beneficial to have one organization to deal with every aspect of national and international marketing of state property. It is proposed to have a new organization that can be named as Property Marketing and Development Authority (PMDA) established under an Act of Parliament. The proposed organization can be assigned to handle PSPA, marketing of state property in national and international markets and implement the provisions of Estate Agency Act proposed to be introduced. Property market in the country could be formalized by the proposed organization. In addition to marketing of property, PMDA can be assigned to manage PPP and Land Readjustment methodology for development of

property. It would be necessary to introduce a procedure under the proposed law to vest state lands identified for disposal on priority basis and empower the Authority to make the listed

Properties clear of any physical and legal obstacles. Undertaking necessary resettlement if any and providing lacking services to make listed properties marketable and developable. There should not be any legal barrier for the PMDA to dispose of land or initiate joint venture projects with public and private partners or use Land Readjustment (LR) or any other modern methods to develop land. The properties listed for disposal and development should be vested with the PMDA on agreement to refund the proceeds to owning organizations after recovering the cost of making the land marketable and the cost of marketing.

Apart from the state land, the PMDA should be provided with legal provision to bring private land to the market with the agreement and participation of the selected private land owners. The PMDA will either sell or lease the private lands on behalf of the owners or develop private lands using varied public PPP techniques.

The properties identified are suggested to be released to the market once or twice a year. The number of properties to be released at a time could be decided on the condition of the real estate market at the time. The use, location and the areas of the marketable properties will be decided based on the government vision, economic, physical and regional development plans and the availability of infrastructure. The PMDA should line up marketable properties for the next couple of years so that marketing operation can be continued smoothly. Depending on the demand in the areas where state lands are not available the private property too can be added to the market using the above mentioned techniques on recovery of a fee for the services offered.

The form of disposal of each and every property should be on the basis of public tender or auction. The tender procedure provides a chance to all interested parties to make a bid. It makes avenue to achieve the best offer for a site rather than making a direct allocation to a party probably on concessionary packages. Properties once tendered and not disposed of could be offered to a new party on first come first served basis at a fixed price.

Preparation of a couple of documents for each and every property listed for disposal is an important task. Compiling a Development Brief (DF) for all properties identified for disposal by the PMDA is a basic requirement. The

properties brought to the market should be accompanied with a DB. The following information is necessary to be included in a DB:

the site – location ,measured area, precise site boundaries together with a site plan, access details, existing uses if any , levels and other ground conditions are important neighboring sites – details of relevant neighboring sites planning framework - status and relevant policies of the development plan

It should contain the basic core information and the most desirable use of the site with planning and building guidance. In addition the form of disposal and selection criterion of the developers should be included. Making a copy of the lease agreement available with the tender documents will be useful for the prospective developers to get an idea of the terms and conditions to make the investment decision without any confusion. In case of a high rise development, attachment of a soil test report is important. This would help the intended developers to undertake a comprehensive prefeasibility study to decide on the bid price.

## **5. Conclusion**

As the theme of this article is property information, “proper management planning and development of property requires authentic and up to date information of the property” .In this regard the first step is the introduction of PSPA under the guidance of property professionals. The success of the property marketing campaign would depend on the efficiency and the level of coordination of the organizations dealing with land sale, investment promotion and granting building approvals. The developers would be happy to get the initial activities fast and complete the development. The PMDA should have provision to follow and coordinate these operational requirements as a part of land sale and lease management activities.

As mentioned the developers wish to undertake market and feasibility studies before committing on any project. The PMDA should be equipped to undertake real estate research and provide reliable and up to date information and data on the real estate market, real estate development and the economy so that the developers could undertake necessary studies for investment decision making.

Lot of studies has been undertaken in connection with the clearance of slums and shanties in the Colombo city and suburbs. In order to clear about 50,000 shanty type dwellings, a project was commenced by the Urban Development Authority in 2010 to construct 50,000 low cost multi story houses accepting unsolicited project proposals on the basis of a fixed price per unit. Under the

project about 18,000 houses are being done. This low cost housing project has been temporarily stopped due to some issues including the present government policy of initiating projects only through tenders. However, there may be instances similar to 50,000 housing project to accept unsolicited proposals based on necessary studies.

It is not intended to discuss the marketing process that involves lot of functions. However, Sri Lanka being a country not yet emerged as a country for real estate development and investment, it is necessary to create an image ahead of commencing the marketing process. Presently the real estate market and development activities in Sri Lanka are not news worthy items to regional and international real estate publications. A well-organized property and effective marketing campaign could change this situation.

### **References**

- The Audit Commission for Local Authorities in England and Wales, Local Authority ,Property and Management Handbook, Her Majesty 's Stationary Office.
- Healey & Baker (1992) Prospects for Commercial Property in the 1990's, Financial Times Business Information, London SW1H 0 DB
- Britton, W, ,Connellan , O. P and M.K Crofts (1989)The Economic , Efficient and Effective Management of Public Authority Landed Estates. Kingston upon Thames, The School of Surveying at Kingston Polytechnic and Surrey County Council 1989.
- Martin Avis , Virginia Gibson and Jenny Watts ( 1989 ) Managing Operational Property Assets University of Reading , Department of Land Management & Development
- Mark Deakin , ( 2002 )The Transition to Property Management, Estate gazette, 151 Wardour Street London W1F 8 BN

## Application of Empirical Rule on Standard Deviation and the Chebyshev’s Theorem: Quantitative Aspects of Real Estate Market Studies

**W.H.T. Gunawardhana<sup>1</sup>**

<sup>1</sup>Lecturer, Department of Estate Management and Valuation,  
University of Sri Jayewardenepura, Sri Lanka

[terans@sjp.ac.lk](mailto:terans@sjp.ac.lk)

### 1. Introduction

Awareness of the distribution of a data is one of the main prerequisites of a deep data analysis towards decision making. As per that, the frequency, mean, standard deviation are most commonly considered. The frequency of a particular observation is, the number of times the observation occurs in the dataset. The distribution of a variable is the pattern of frequencies of the observation. Frequency distributions are portrayed as frequency tables, histograms etc.

Real estate market analysts are keen on considering the distribution of land values, rentals values, property sales prices etc of an area for their decision making purpose—real estate valuer also looks forward to collect as much as possible data specific to the subject property as well as related data from the market. Further, the average values, minimum-maximum, range, mode and median etc are the key indices used. Finally, the aim is to come up with a reasonable estimation for the subject property.

### 2. Applications

This paper mainly aims at demonstrating the importance of Application of Empirical Rule on Standard Deviation and the Chebyshev’s Theorem in Real Estate Market Studies. Accordingly, 100 Land Values per perch in Maharagama Urban Council are collected. Mean land value per perch is Rs.370, 870/- with respect to Rs.121, 000/- Standard Deviation. Minimum per perch value is recorded as Rs. 180,000 and maximum per perch value is Rs. 600,000.

**Table 01: Descriptive Statistics**

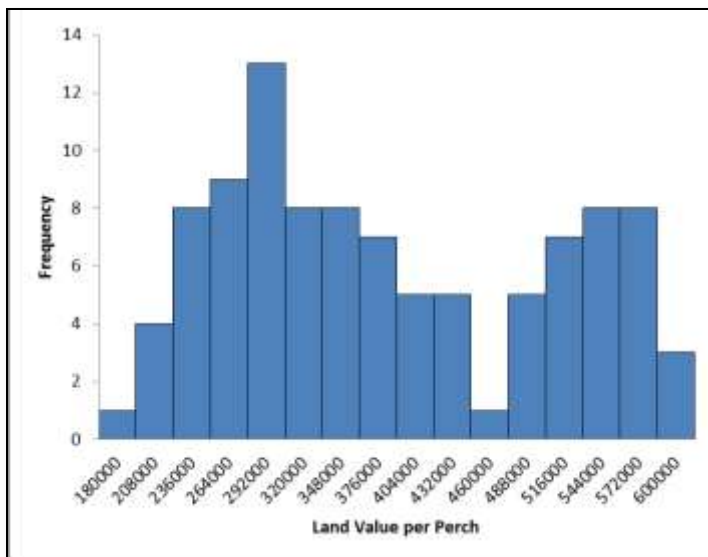
Mean	370870
Standard Error	12100.01
Median	340000
Mode	290000
Standard Deviation	121000.17

Sample Variance	14641043535
Kurtosis	-1.233417846
Skewness	0.304400302
Range	420000
Minimum	180000
Maximum	600000
Sum	37087000
Count	100

Source: Compiled by the author: 2015

With above data, histogram can be drawn to provide a better illustration for the distribution. As per that, initially, class width; 28000 is used.

**Figure-01: Histogram of the Land Value Distribution-Class Width is 28000**



Source: Compiled by the author: 2015

In the above figure-01, it clearly exhibits that there are two separate groups of the distribution. That is called a bimodal distribution. From Rs. 180,000 to Rs. 432,000 range, it is possible to find one distribution and secondly from Rs.460, 000 to Rs.600, 000 shows separately the second distribution.

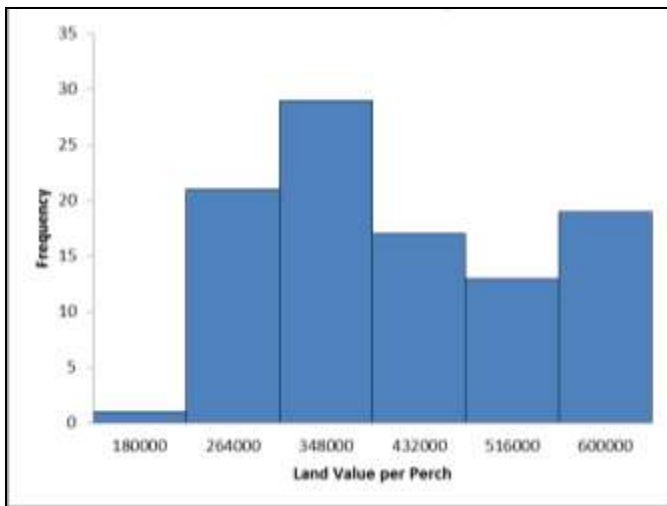
Further, the shape of this bimodal distribution can be seen only with aforesaid class width of 28,000 or less. When the class width is increased or

decreased significantly away from this 28,000, gradually, the shape of the histogram gets less informative or complex.

Accordingly, following figure-02 shows the shape of the histogram where class width is comparatively large; 84,000. As a result of that, real shape of the land values distribution is not presented by the histogram: it is a less informative presentation.

This histogram doesn't provide enough evidences to identify even the mode, mean etc in the distribution.

**Figure-02: Histogram of the Land Value Distribution-Class Width is 84000**



Source: Compiled by the author: 2015

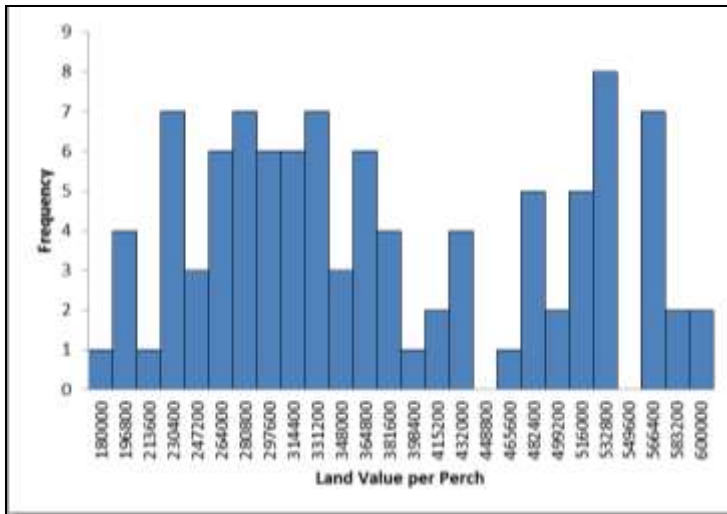
Further, as in the figure:02, when the class width that is too large, there are a few big lumps that tell nothing about the actual distribution of the data. In this data set Rs.370, 870 is the mean land value per perch; but histogram doesn't provide enough sight to understand it.

Also, although the mode of the distribution is 290,000, this histogram doesn't indicate it clearly. Simply, this large class width histogram can be considered as a less informative presentation.

The only solution for that repercussion is to select a low class width as displayed in the figure-03.



**Figure-03: Histogram of the Land Value Distribution-Class Width is 16800**



Source: Compiled by the author: 2015

### 3. The Empirical Rule on Standard Deviation

As enormous literature sources proved, if a data set has an approximately bell-shaped relative frequency histogram,

Approximately 68% of the data lie within one standard deviation of the mean, that is, in the interval with endpoints  $\bar{x} \pm s$  for samples and with endpoints  $\mu \pm \sigma$  for populations;

Approximately 95% of the data lie within two standard deviations of the mean, that is, in the interval with endpoints  $\bar{x} \pm 2s$  for samples and with endpoints  $\mu \pm 2\sigma$  for populations; and

Approximately 99.7% of the data lies within three standard deviations of the mean, that is, in the interval with endpoints  $\bar{x} \pm 3s$  for samples and with endpoints  $\mu \pm 3\sigma$  for populations.

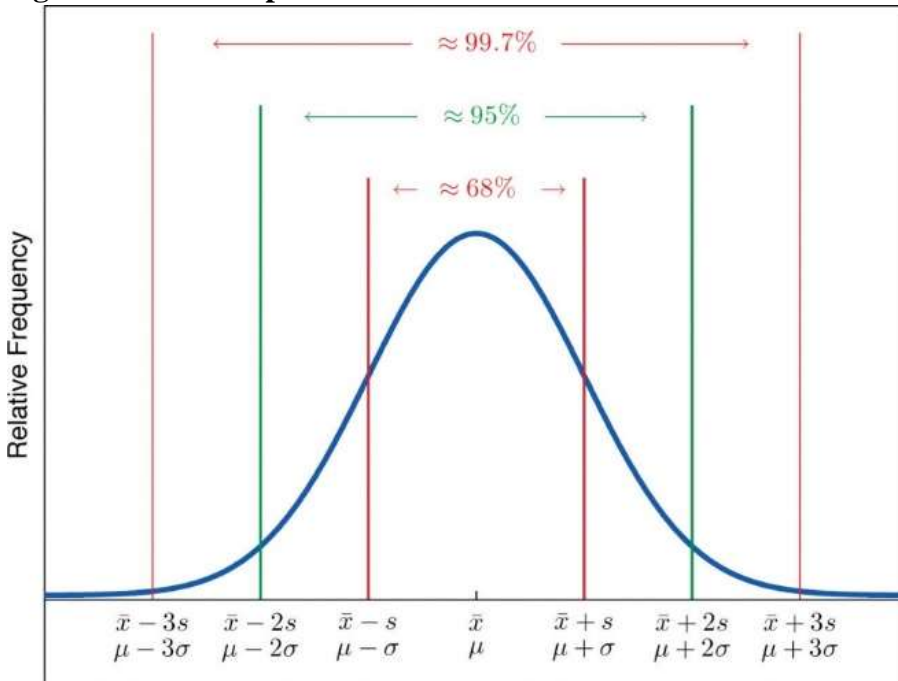
If it assumes the land value per perch distribution with mean Rs.370, 870 and standard deviation Rs. 121,000, following questions could be answered. About what proportion of all such men are between Rs.249870, Rs.491870? What interval centered on the mean should contain about 95% of all such land values?

Since the interval from Rs.249,870, Rs.491,870 has endpoints  $\bar{x} - s$  and  $\bar{x} + s$ , by the Empirical Rule about 68% of all land value observations should have in this range.

By the Empirical Rule the shortest such interval has endpoints  $\bar{x}-2s$  and  $\bar{x}+2s$ . Since  $\bar{x}-2s=370870-2(121000)=128870$  and  $\bar{x}+2s=370870+2(121000)=612870$

The interval in question is the interval from Rs. 128,870 to Rs.612, 870. Also in this sample, Rs. 180,000 to Rs.600, 000 is the value range.

**Figure-04: The Empirical Rule Illustration**



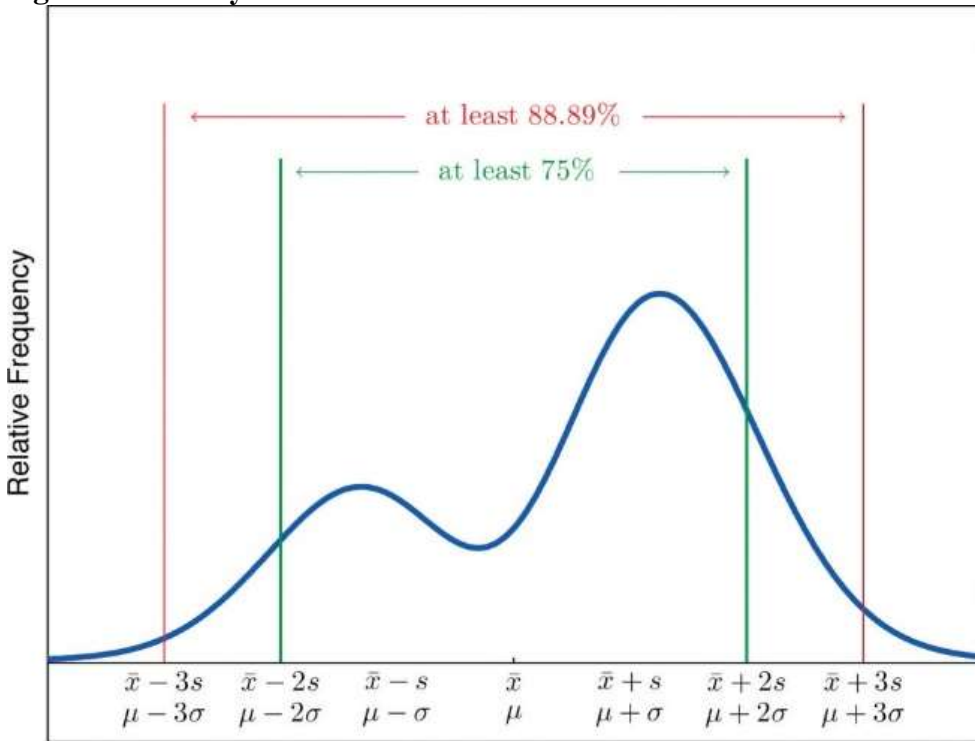
However, the most important thing is to do estimation close to the mean value or deviate by a reasonable amount away from the mean with a justifiable reason. Because, this is effect on the accuracy of valuation or estimation—if the estimation is away from the mean three times of the standard deviation, it falls generic estimation unless the valuer provides enough justifications.

**3. Chebyshev’s Theorem**

As the Empirical Rule exits with a limitation—it does not apply to all data sets, only to those that are bell-shaped, and even then is stated in terms of approximations. Alternatively, the rule applies to every data set is known as Chebyshev’s Theorem.

According to this theorem for any numerical data set,  
 At least  $3/4$  of the data lie within two standard deviations of the mean, that is, in the interval with endpoints  $\bar{x} \pm 2s$  for samples and with endpoints  $\mu \pm 2\sigma$  for populations;  
 At least  $8/9$  of the data lie within three standard deviations of the mean, that is, in the interval with endpoints  $\bar{x} \pm 3s$  for samples and with endpoints  $\mu \pm 3\sigma$  for populations;  
 At least  $1 - 1/k^2$  of the data lie within  $k$  standard deviations of the mean, that is, in the interval with endpoints  $\bar{x} \pm ks$  for samples and with endpoints  $\mu \pm k\sigma$  for populations, where  $k$  is any positive whole number that is greater than 1.

**Figure-05: Chebyshev’s Theorem Illustration**



In this study, sample size  $n = 100$  has mean  $\bar{x} = 370,870$  and standard deviation  $s = 121,000$ . Without knowing anything else about the sample, again same questions can be answered;  
 What can be said about the number of observations that lie in the interval (249870, 491870)? What can be said about the number of observations that lie outside that interval?

The interval (249,870, 491,870) is the one that is formed by adding and subtracting two standard deviations from the mean. By Chebyshev's Theorem, at least 3/4 of the data are within this interval. Since 3/4 of 100 is 66.66, this means that at least 66.66 observations are in the interval. So it concludes that at least 67 observations must lie inside the interval (Rs. 249,870, Rs.491,870).

If at least 3/4 of the observations are in the interval, then at most 1/4 of them are outside it. Since 1/4 of 100 is 33.33, at most 33.33 observations are outside the interval, x (Rs.249,870, Rs.491,870).

As per that in this data set, there are 16 data below the Rs. 249,870 and 24 data above the Rs. 491,870 range. Hence, this result is coinciding with Chebyshev's Theorem. See the table 05 of the annexures.

### **Conclusions**

In most studies, to arrive at a better conclusion, qualitative aspects as well as quantitative findings need to be considered. Accordingly, the distribution of a dataset of a study needs to be examined deeply. For that, an appropriate class width can be selected and draw a reasonable shape for the distribution.

The Empirical Rule holds for normally distributed populations. In addition: The Empirical Rule also approximately holds for populations having single peaked; mound-shaped distributions that are not much skewed. In some situations, the skewness of a mound-shaped distribution can make it tricky to know whether to use the Empirical Rule. Hence, the class width is a decisional choice to have a realistic view of the distribution.

Chebyshev's Theorem is appropriate if that the Empirical Rule does not hold for a particular population, it is possible to consider the Chebyshev's Theorem to find an interval that contains a specified percentage of the individual measurements in the population.

Application of these rules and theorems in Cost estimations, Real Estate valuations etc may provide adequate insights to arrive at conclusions. However, the large standard deviations may cause high level of inaccuracy of the calculations, analysis and conclusions. Therefore, at the data collection stage, relevancy, consistency and accuracy should be maintained.

Further, as especially in Real Estate Market Studies spread over large geographic area, area segmentations would be important to overcome aforesaid issues.

And also, less comparable may decrease the accuracy of the estimation coupled with less experience of the estimator or valuer. Hence, the recommended way is to increase the number of observations to the comparable list. Finally, validation of findings with qualitative aspects of observations may provide a complete representation about the focus.

**Bibliography**

- Attaway, F.J (1990, “Commercial site valuation by technique rather than direct comparison”, The Appraisal Journal, April, pp. 205-10.
- Coleman, J.W. and Larsen, E.L. (1991), “Alternative estimation techniques for linear appraisal models”, The Appraisal Journal, October, pp. 526-33.
- Donald Moliver, Jess Boronico, (1996) "Unit selection and the sales comparison approach", Journal of Property aluation and Investment, Vol. 14 Iss: 5, pp.25 – 33
- Kachigan, Sam Kash. Statistical Analysis. New York:Radius Press, 1986.
- Newsome, B.A. and Zietz, J. (1992), “Adjusting comparable sales using multiple regression analysis – the need for segmentation”, The Appraisal Journal, January, pp. 129-35.
- Newmark, Joseph. Statistics and Probability in Modern Life. New York: Saunders, 1988.
- Triola, Mario G. Elementary Statistics, 7th ed. Reading,Mass.: Addison-Wesley, 1998.

**Annexures:**

**Table 01: Frequency Table: Class Width is 84000**

<i>Bin</i>	<i>Frequency</i>
180000	1
264000	21
348000	29
432000	17
516000	13
600000	19

*Source: Land Prices Data Base: 2015*

**Table 02: Descriptive Statistics: Class Width is 28000**

<i>Bin</i>	<i>Frequency</i>				
180000	1	320000	8	488000	5
208000	4	348000	8	516000	7
236000	8	376000	7	544000	8
264000	9	404000	5	572000	8
292000	13	432000	5	600000	3
		460000	1		

Source: Compiled by the author: 2015

**Table 03: Descriptive Statistics: Class Width is 16800**

<i>Bin</i>	<i>Frequency</i>				
180000	1	314400	6	465600	1
196800	4	331200	7	482400	5
213600	1	348000	3	499200	2
230400	7	364800	6	516000	5
247200	3	381600	4	532800	8
264000	6	398400	1	549600	0
280800	7	415200	2	566400	7
297600	6	432000	4	583200	2
		448800	0	600000	2

Source: Compiled by the author: 2015

**Table 04: Land Values Data Set in Maharagama Municipal Council Area**

490,000	350,000	320,000	220,000
260,000	250,000	250,000	230,000
520,000	380,000	530,000	240,000
370,000	320,000	270,000	420,000
380,000	330,000	220,000	420,000
560,000	450,000	340,000	240,000
290,000	550,000	560,000	340,000
510,000	480,000	330,000	190,000
312,000	290,000	240,000	270,000
270,000	190,000	270,000	390,000
510,000	360,000	300,000	340,000
515,000	560,000	250,000	510,000
290,000	470,000	310,000	480,000
600,000	250,000	510,000	380,000
325,000	530,000	220,000	410,000
310,000	190,000	530,000	250,000

560,000	220,000	530,000	520,000
330,000	310,000	570,000	430,000
280,000	550,000	350,000	530,000
180,000	230,000	590,000	230,000
290,000	470,000	190,000	480,000
350,000	490,000	330,000	350,000
270,000	550,000	360,000	430,000
290,000	580,000	280,000	520,000
290,000	305,000	210,000	400,000

Source: Compiled by the author: 2015

**Table 05: Land Value Re-arrangement to verify the Chebyshev's Theorem**

180000	250000	290000	350000	450000	530000
190000	250000	300000	350000	470000	530000
190000	250000	305000	350000	470000	530000
190000	250000	310000	350000	480000	530000
190000	260000	310000	360000	480000	550000
210000	270000	310000	360000	480000	550000
220000	270000	312000	370000	490000	550000
220000	270000	320000	380000	490000	560000
220000	270000	320000	380000	510000	560000
220000	270000	325000	380000	510000	560000
230000	280000	330000	390000	510000	560000
230000	280000	330000	400000	510000	570000
230000	290000	330000	410000	515000	580000
240000	290000	330000	420000	520000	590000
240000	290000	340000	420000	520000	600000
240000	290000	340000	430000	520000	
250000	290000	340000	430000	530000	

Source: Compiled by the author: 2015

## **Land information Systems for Land Administration, Land-Use Planning and Resources Management; Reference to Mahaweli Development Project**

**H. H. Leelananda<sup>1</sup>**

<sup>1</sup>Director, Land Use Planning  
Mahaweli Authority, Sri Lanka

[leela1968@gmail.com](mailto:leela1968@gmail.com)

### **1.introduction**

Mahaweli System has been in operation in the last 30 years and it has problems which require urgent addressing, also there are opportunities to exploit and room for implementing many improvements. However, Mahaweli Authority of Sri Lanka(MASL) that manages the Mahaweli System does not have current, accurate, reliable and dependable central information system of modern day standards and tools that can be used for analyzing various types of data for more sustainable planning, for solving problems and to put its all resources for the optimum use.

The required information system shall eventually include land, farmer, agricultural, water management, climatic, infrastructure, natural resources, environmental and many more for more holistic approach that can lead to deliver more sustainable solutions. However under the current project only the high priority information is proposed. Land and farmer information are among top high priority information required for the MASL at present. Although the farmers have been settled in lands and ownerships have been duly transferred over 30 years ago, the system is plagued with unauthorized encroachment of lands, improper use of lands, inefficient use of lands, fragmentation of lands due family expansions and other reasons. Furthermore, over the years, farmer families have exhibited varying level of successes.

Some farmer families have significantly improved the living standards while some families have devastated due to regular crop failures and diseases like Chronic Kidney Disease (CKD) of which the cause has not been clearly established yet. There has never been a full scale socio-economic survey carried out covering the entire Mahaweli System in recent years. MASL has water management information, asset management information and engineering information which are not in commonly sharable base. These information shall also be integrated in a central information system for more holistic and sustainable planning and management of the System.

Given the nature of the information pertinent to the Mahaweli System, which are primarily spatial, types of analyses and nature of decision support tools that MASL



require, Geographical Information System based Integrated Information System is the best solution to cater the Information System needs.

In addition to the basic information system, in order to assist the management and its own experts, MASL will require user friendly computer based tools for data analyzing and decision making. Some of the envisaged such highly useful tools are multi-criteria prioritizing, crop suitability analysis, weather prediction, agri-produce prediction, land location and farmer location and other spatial information processing and analyses. Once the Information System is in place, the in-house Sociologist, Economist, Engineers, Town Planners, GIS Specialists, Agricultural Specialists, Environmental Specialists, Water Management and the MASL management are expected use of the system and contribute to significant improvement in the overall management.

The implementation of the (LIS) within the Mahaweli Authority of Sri Lanka will secure the development of an efficient and effective National Land Information System. A geographic information system (GIS) allows the user to examine and visualize these relationships. Because a multitude of planning and administration functions require geographic information at least 70 percent of all information used by MASL is geographically referenced. For example, water management systems, property records and assessments, planning and zoning, permits, natural resource management, infrastructure and transportation management, economic development planning, and health and public safety. All of these applications consider the location of certain features on the landscape in relation to other features. The records commonly held for land administration are also the foundation for integrated spatial information systems that link multiple users in the MASL services by electronic means.

## **2. Project background**

Mahaweli Development Scheme is one of the biggest agricultural, hydropower and rural social economic development programs implemented in Sri Lanka. The scheme in its entirety is commonly referred as Mahaweli System. The system comprise of 365,000 ha of developed agricultural land, 15 reservoirs storing 7400 MCM of water, and installed hydropower capacity of 508MW. The system is providing livelihood for over 600,000 farmer families and has generated large number of primary and secondary industries, businesses and commercial activities.

Mahaweli System is managed by Mahaweli Authority of Sri Lanka [MASL] which has been incorporated through an act of Parliament with special powers. MASL is managed by a Director General with the support of four Executive Directors, two project directors, 12 resident managers. MASL has its head quarters in Colombo and there are 17 site offices distributed over the Northern, North-Central, Eastern, Central and Southern Provinces.

MASL has profound professional staff to manage countries most important and complex water regulatory system comprising dams and reservoirs and irrigation canal network. It carries well trained experienced professionals, trained locally and abroad, specialized in the fields of civil and mechanical engineering, agriculture, physical planning, Settlement planning, business development, land management, institutional development, environmental conservation, accounting and administration.

The Sri Lankan Government has initiated a national level program for establishment of National Spatial Data Infrastructure (NSDI) system for the country. The program is a collaborated effort of the other government and semi government agencies which are producing spatial data for different aspects. However, NSDI program is intended to be implemented in National Level and may take several years to produce usable data. Development of MeLIS will therefore not only in-line with the Government Policy of Sri Lanka but also will be a good pilot project in spatial data integration and sharing. In line with the National Policy, some information of MeLIS will be shared with NSDI subsequently.

Bringing about sustainable solutions to problems and sustainable development require integrated analytical approach with due consideration given to social, economic, technological and environmental factors. However, MASL does not have current, accurate reliable and dependable central information system and modern day tools that can enhance all the analyses, planning, optimizing and management of problems, opportunities, assets and resources that comes under its purview.

### **3. Proposal feasibility**

#### **3-1. Economic Feasibility**

The MASL and will be benefited by the availability of data rich information system and tools for analysis and supporting the decision making in planning and management of the Mahaweli System. The benefits will flow down to the grass-root level stake holders such as farmers and all those who make livelihood from the system.

#### **3-2. Technical Feasibility**

The MASL staff and other stakeholders of the project will be able to acquire international expertise knowledge and technology of GIS based information system and make use of decision support system in planning and management.

#### **3-3. Social and Cultural Feasibility**

Much of the benefits from the project will quickly flow down to the lower level stake holders such as farmer families due to ability to address their issues there by creating more integrated community.

**3-4. Sustainability**

The assurance is given for maintenance of the project with the assistance of MASL and Sri Lankan Government. MASL has capacity to maintain and update the base data to be produced under this project for future requirement as well.

**3-5. Miscellaneous (Environmental or Gender issues, etc.)**

The implementation of this project will be highly beneficial to the environment due to the increase in visualize and address the environmental issues like monitoring ground water quality, reservoir water quality, preserving wild life and forestry etc.

**4. Objective of the project****Main Objective**

To prepare a Land information system for the Mahaweli authority of Sri Lanka to manage land and its resources, homesteads, Irrigable agriculture, un-irrigable agriculture, commercial and reservations.

**Specific Objectives**

To develop and implement GIS integrated Mahaweli Electronic Land Information System (MeLIS).

To develop Decision Support Tools for MeLIS for analyzing, planning and managing the Mahaweli System more efficiently.

To update Land Information

To update Farmer Information

Integration with existing water management, asset management and engineering and other information

**5. Beneficiaries**

Management, Engineers, Sociologists, Economists, Agriculture Specialists and other Experts of MASL

Stake holders of Mahaweli System.

The Central and Provincial Administrative and Government Agencies

Government agencies such as Irrigation Department, Agriculture Department, Road Development Authority, Survey Department, Census Department, Central Environmental Authority etc.

Researches, University Students, and educational institutions involving for study of urban planning

**6. Data collection**

Base data collection for the project will be carried out using various methods as given below;

Development of software solution as a database, which can be used to store deferent type data, images and maps with the ability of analyzing the various types of data. Database should be able to operate, particularly, the relationship among different entities and their attributes. Purchase available existing GIS (digital data) data from the Survey Department and other Government agencies of Sri Lanka. Carry our social economic survey covering the entire Mahaweli System. Update land database using high resolution Satellite Images. Digitize the land parcels and update the database. Update land data from the survey department sources. Integrate existing data from various departments of the MASL

## **7. Results**

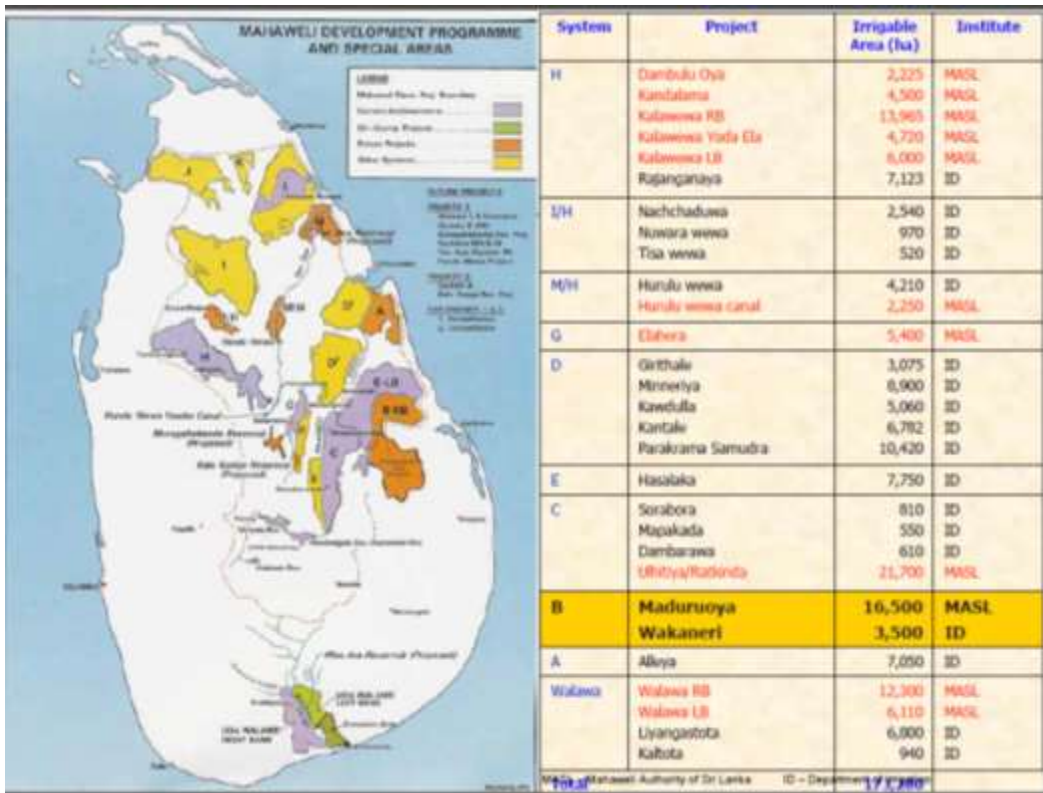
Establishing of integrated decision making approach is highly important to devolve a sustainable and accurate GIS based information system which can be used by the management and the in-house experts of the MASL. Updated land information, socio economic data, integration of water management, asset management, engineering and other information of the Mahaweli System.

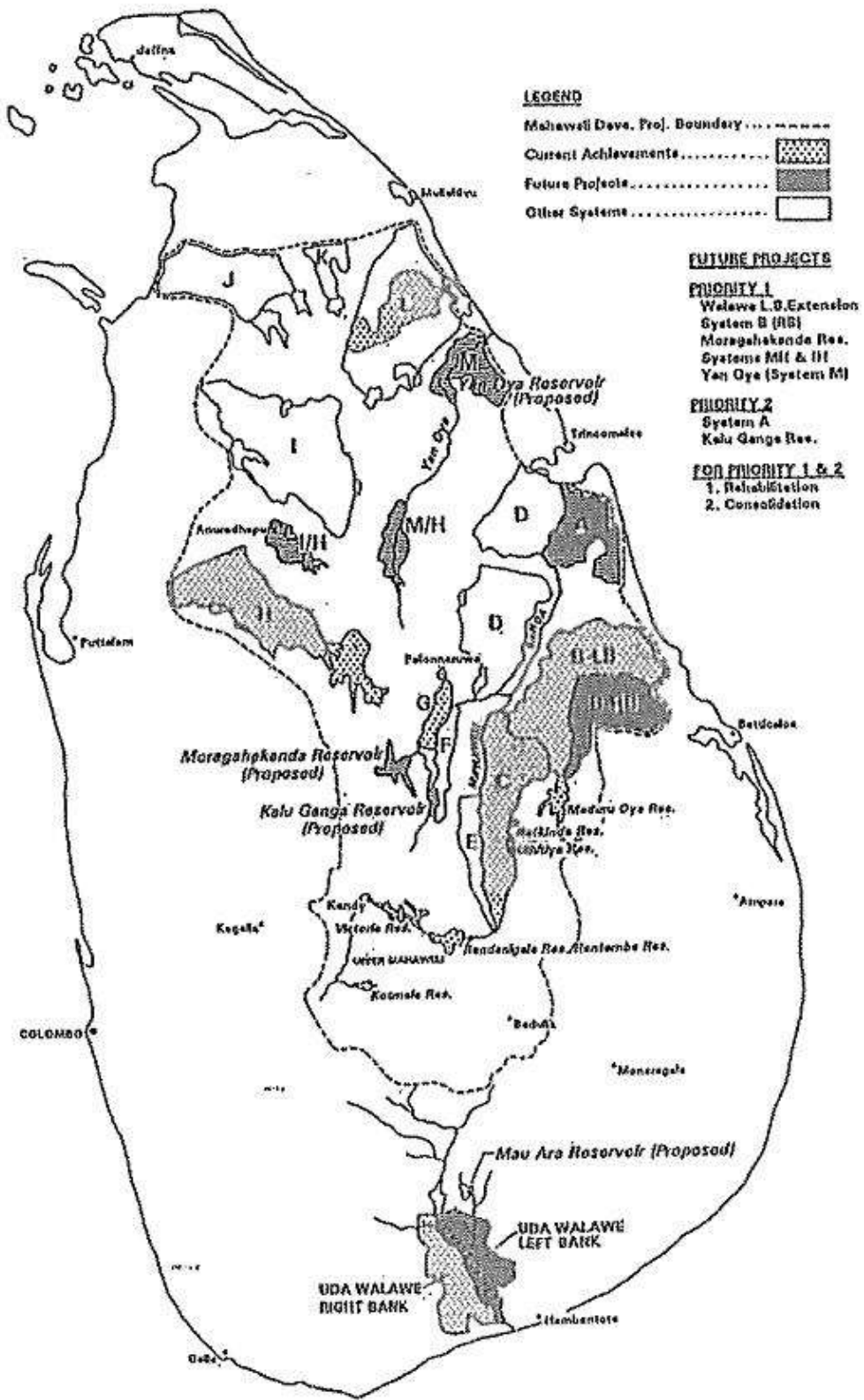
The Mahaweli Authority achieved close to its targets for physical works, number of beneficiaries, and rice production the systems does not have current, accurate, reliable and dependable central information system of modern day standard and tools that can be used for analyzing various type of data for more suitable planning, implimentation and feedback for solving problems and to put its all resources for the optimum use.

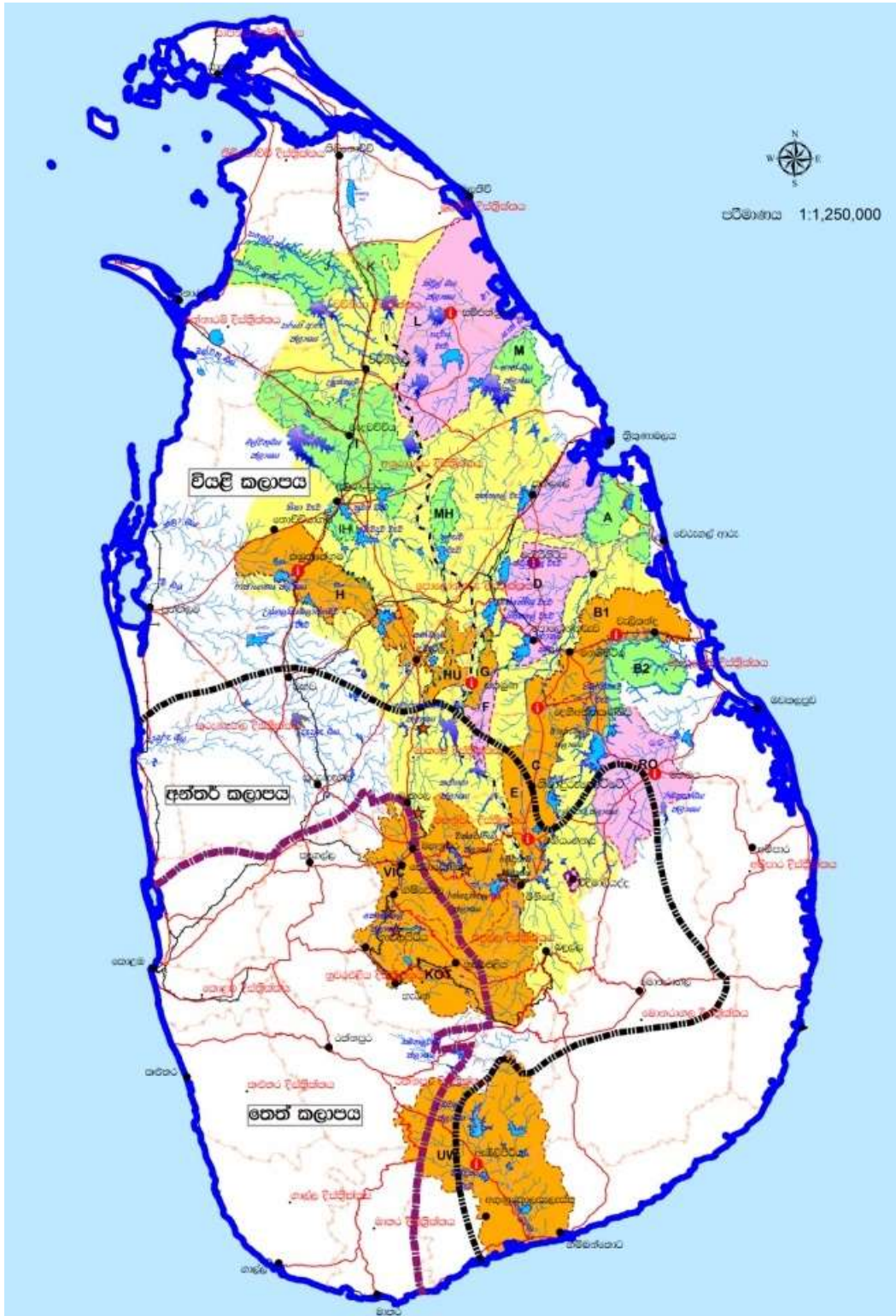
The proposed Mahaweli Electronic Land Information System (MeLIS) will benefit the MASL Management, Experts and all the stake holders by the availability of information and decision support tools.

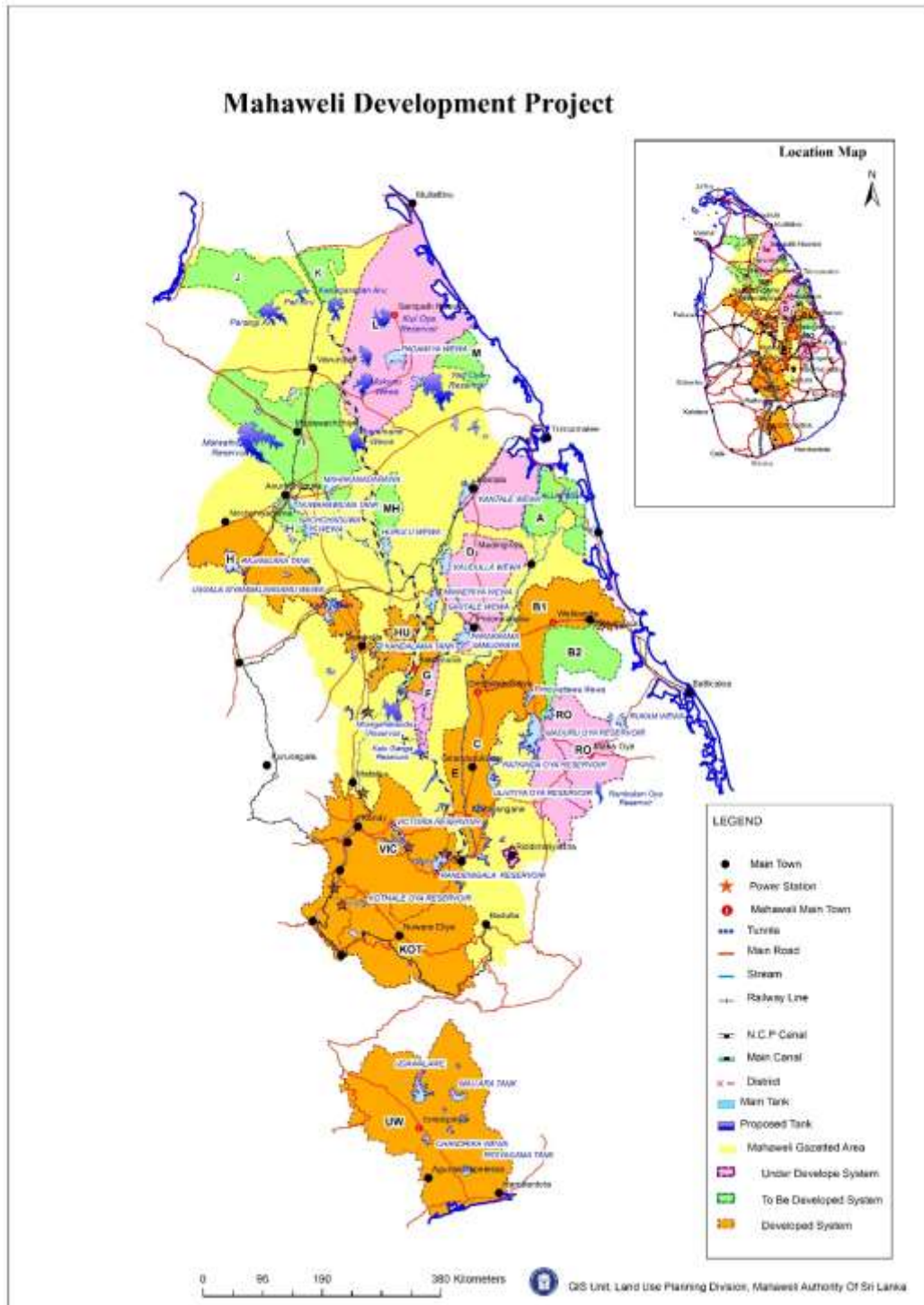
It is hoped to uplift the overall technical and management capabilities of the MASL and finally uplift the socio economic standing of the farmer and other stakeholder families of the Mahaweli System.

Location of Mahaweli Project Area (Mahaweli System)











## Urban Change and Real Estate Market

Athula Wijethunga<sup>1</sup>

<sup>1</sup>Executive Real Estate

Phoenix Venyutes Pvt Ltd.

[athulaw@brandix.com](mailto:athulaw@brandix.com)

### 1. Introduction

After a period of prolonged political and economic uncertainty, Sri Lanka witnessed normalcy as the war ended in May 2009. The country has since experienced stability and peace. Consequently, various development initiatives have been undertaken to promote and strengthen the economy, with the government initiating infrastructure projects to promote real estate development. The real estate market in Sri Lanka is developing gradually. To encourage this process the government and the planning authorities released their lands and property to the market for developments. Especially the government institute which was located in Colombo shifted to Baththaramulla while developing those properties according to the highest and best use. Because of the high demand for real estate, the private owned properties are also coming to the market. All of these activities initiate an Urban Change. As an example if we closely observed Colombo real estate market, lot of real estate developments is in progress. Some corporate entities have released their property for redevelopment while they shifting to an industrial zone or outside Colombo. To regulate this Urban Change the planning authorities have a vital role to play. Especially they should activate to overcome ad-hoc developments.

Now the government is planning to implement a megapolis plan for the entire western region. With the implement action of this plan the Urban Real Estate market will response according to the plan. It means the urban structure also will get a new shape. This paper is aimed to discuss the “Urban Change and The Real Estate Market” in historical perspective.

### Definitions of Urban

Definitions of ‘urban’ vary internationally. There are many indicators of urban that are widely used to differentiate between urban and non-urban areas such as population size, population density, number and range of services available and employment profiles. Basic distinctions can be drawn between towns and metropolises, and between cities and megalopolises. However, as one goes down the scale from the largest urban agglomeration to the smallest town, it is difficult to identify break points and terminology that are universally accepted (Clark 1996).

Although indicators can identify differences of degree, they do not provide a definition of ‘what is urban’ (Hall 1998, 19-20). While indicators can provide an interesting partition, they are unable to isolate and identify that which is unique to

urban areas. Sociologist Manuel Castells said, 'A city is what a historical society decides a city will be. 'Urban' is the social meaning assigned to a particular spatial form by a historically defined society' (1983,). This statement disregards comparisons and creates a more abstract view of the city that focuses more on qualitative aspects such as experiences and relations of people in a certain area as opposed to quantitative aspects of what defines a city such as population total.

With the development of a country, the urban changes occur according to that. It is a must to enhance the condition of lives and to have a sustainable development. Cities are ever changing, they are 'alive', they respond to ever changing need. The most constant feature of cities is change. They represent a process of evolution by changing all the time but not always with a great evolutionary success. Urban form adapts to changes in civilization reflecting their social structures (Anthony Clerici, Izabela Mironowicz, 2009).

Even though there is not an exact definition for urban, it can be defined getting its characteristics "An urban area is characterized by higher population density and vast human features in comparison to areas surrounding it".

### **Urban Change (City Transformation)**

Urban transformation is often considered as a 'modern' feature of the city. It inclined to regard current changes as something unusual particularly in scale and depth of their transformation. Looking back in the Mediterranean basin there has been no less than three great urban transformations leading to a completely different form of the city (Mumford, 1961; Le Goff, 1964). Cities transform environments and landscapes not only within the built-up area but also for considerable distances around them. The inhabitants, environment and natural resource base of this wider region are usually affected by transformations brought by the expanding city for instance, as land surfaces are reshaped, valleys and swamps filled, large volumes of clay, sand, gravel and crushed rock extracted and moved, water sources tapped and rivers and streams channeled secondly the demand from city-based enterprises, households and institutions for the products of forests, rangelands, farmlands, watersheds or aquatic ecosystems that are outside its boundaries. Thirdly solid, liquid and air-borne wastes generated within the city and transferred to the region around it.

This City transformation follows social, technological and economic change. City form is shaped by civilization and its values. Recent city transformation based on urban growth leads essential question about urban form. There has been considerable debate over factors affecting quality of urban development. Most of them refer to three key issues: economy, social cohesion and environment.

The first urban transformation in the middle of the 4th millennium BC saw the city as a new type of settlement. Two thousand years later the second metamorphosis

shaped the ancient Greek city. Finally, the third urban revolution brought a city model based on medieval order that still existing today. All of these transformations weren't 'small changes', they led to completely different city structures and, as a consequence, to new city forms.

Since the first half of 19th century we have been experiencing the fourth urban transformation which can be considered as so far incomplete. This process of shaping a new pattern of the city has two aspects. First is enormous city growth in area, population and influence on the global economy. Considering only one but significant example of the City of London, the transformation from nodal city into its new form which has yet to be labelled: an agglomeration; a city-region: an urbanized area; a metropolitan area ('metro') is clearly noticeable (Calthrope & Fulton, 2001; Garreau, 1991; Lang, 2003; Proserpi, 2007). London's population increased from the beginning of the 18th century when it rose from 4th in the world with 550.000 residents to 1st in 1850 with 2.320.000 inhabitants. It then almost doubled in next 25 years (4.241.000), tripled in 50 years (7.742.000) and quadrupled to 8.860.000 in 1950. It lost its leading position in 1925 (Chandler, 1989). By 2006 it had sunk to 21st position with 12 million residents. Population figures are an indication that present cities cannot be like the past. The new form of the city is not simply an 'up scaling' the old into a new larger one. It observes the emergence of a new model of the city.

Chen (2009) studied city transformation form industrial to residential. The economic transition in China features a fundamental change of its urban property rights system (Li, 1999; Zhu, 1999) and the emergence of the world's largest urban commercial property markets which drive the rapid transformation of inner-city areas in major Chinese cities from industrial to residential and commercial uses (Wu, 2009). Since 1990s state-owned industrial enterprises that were previously located in inner-city areas have started to be relocated and replaced by non-industrial land uses such as high-density residential. This is generally known and termed as "Suppress the second industry and develop the third industry", which in the urban economics context is a term to describe the process of increasing residential and commercial spaces in inner-city areas by moving out and relocating those heavy or light industries from the same localities.

The area of inner-city brownfield redevelopment in cities that are being transformed within a relatively short period of time. In particular, China's current condition of being a "transitional economy" makes it one of the most typical country cases in facing this substantial change of land use from industrial to residential or commercial purposes in inner-city areas in major cities in a relatively short period (Zhu, 1999; Wu, 2009; Cao and Guang, 2007). One of the key components is to identify and evaluate the conditions and effects of brownfield development based on existing theory and the real cases found in China. In this this study, urban

brownfield land is defined as inner-city sites with industry heritage from the planned economy era in China which have been or are being redeveloped or transformed into residential or commercial uses. Brownfield development research in transitional economies such as China has unique features; for example, the scope is often large and usually there is strong and direct government intervention, which differs as compared to many mature markets.

According to Chen (2009) following aspects has identified when city transformation form industrial to residential.

The project's land use history;

Its basic background being a redevelopment from industrial property to high density residential area. its associated planning policies, given a set of socio-economic background;

Development attributes that are related to the land use history, focusing on how the developer views the problem (existing and potential) of site contamination in the development process, and government's attitude towards development projects of this nature;

And government land supply policies to study the formal practices for inner-city brownfield (former industrial sites).

In this city transformation the capital of the country also shift from one city to another city. As an example in India the former capital city was Mumbai, now it has been shifted to Newdhilli. These capital relocation can be identified in historical perspective. In Sri Lanka the capital is moving to Sri Jayewardenepura.

### **Urban Change and Importance of Planning**

Understanding what causes and influences urban change within any nation is complicated. Consideration has to be given to changes in the scale and nature of the nation's economy and its connections with neighboring nations and the wider world economy and to decisions made by national governments, national and local investors and the 30,000 or so global corporations that control such a significant share of the world's economy. Urban change within all nations is also influenced by the structure of government (especially the division of power and resources between different levels of government), the extent and spatial distribution of transport and communications investments and the spatial influences of macro-economic policies. These in turn influence the spatial distribution of new investment and the locations where employment expands or contracts. The size and rate of change of the population in each of the 50,000 or so urban centers in the world are influenced not only by such international and national factors but also by local factors related to each very particular local context including the site, location, natural resource

endowment, demographic structure, existing economy and infrastructure (the legacy of past decisions and investments) and the quality and capacity of public institutions. With the development of the Cities require a large input of fresh water and other natural resources, and the more populous the city and the richer its inhabitants, the greater the demand on resources and, in general, the larger the area from which these are drawn. As nations become increasingly wealthy, it is common for increasing proportions of food and other natural resources to be imported. Water needed for industrial processes, supplying residential and commercial buildings, transporting sewage and other uses is then returned to rivers, lakes or the sea in a state of much-reduced quality. Storm and surface run-off also collects large pollution loads as it flows through cities – especially where there is inadequate provision for solid waste collection, as much of the uncollected solid waste generally finds its way into water bodies. Air pollutants generated by city-based enterprises or consumers are often transferred to the surrounding region through acid rain, affecting soils and water bodies (and sometimes damaging vegetation). In general, the weakness of local authorities in the areas around cities means that many environmental costs generated by production and consumption within the city are transferred to the surrounding areas.

Within this area around cities, agriculture is generally in decline, as people or companies buy land in anticipation of its change from agricultural to urban use and of the associated increases in land value as the city's built-up area and transport system expand. There is usually a lack of effective public control of such changes in land use or on the profits that can be made from them, even when it is public investment (for instance, the expansion of road networks) that creates much of the increase in land values. Around prosperous cities, this process is also encouraged by the scale of profits that can be made and it is difficult to develop governance structures that prevent politicians and powerful vested interests being the prime beneficiaries. In many cities, land speculation may also be encouraged by a lack of other domestic high-return investment opportunities. In this, the local government has a greater role.

### **Importance of the Local Governments in Urban Change**

In this process Local governments are important in city planning and development and responsible for community decision-making. They are also important actors in their local economies. Some examples of government power in cities include the power to pass legislation, to plan and design transportation systems, the power to ensure strong and robust local economic development patterns, the power to address land tenure and land rights in the city and the power to develop creative financing tools for mobilizing investment towards sustainability. They have the power to encourage participation and engage with citizens and local organizations (Cities Alliance 2007). They build and maintain infrastructure that is essential for economic activity, and set standards, regulations, taxes and fees that determine the parameters

for economic development. Local governments procure large numbers of services and products and can influence markets for goods and services such as environmental, economic and social services (Roseland 2005, 191-193). The development has been focusing on optimizing space from the market point of view. City centers and underdeveloped central areas have been highlighted because they can generate a big profit through urban redevelopment. Along with the progress of the real-estate market, the driving force has shifted urban redevelopment from welfare provision to profit making and the result is that economic parameters are becoming overwhelmingly dominant in the operation of land development while social issues are put in the background. Often, local governments form important partnerships with the private sector and new urban spaces are created by moving existing residents through residential relocation, changing demographic profiles (Wu et al. 2007).

The absence of effective governance structures also means little planning, little development control and little investment in trunk infrastructure in the expanding urban periphery or only planning controls that can be ignored or subverted by powerful political or economic interests. In the absence of any effective land-use plan or other means to guide and control new developments, cities expand haphazardly. This produces a patchwork of different developments, including businesses and high-density residential settlements, interspersed with land that remains undeveloped and is held by its owners in anticipation of speculative gain. Land development occurs as a result of legal and illegal action by various landowners, builders, developers and real-estate firms in an ad-hoc way. There are usually many legal sub-divisions around the city for houses or commercial and industrial buildings that have been approved without reference to any city-wide plan. Many major cities have no city-wide plan because the built-up areas fall into different local jurisdictions, and no governance structure has developed to allow coordinated planning between them.

Uncontrolled physical expansion also destroys natural landscapes around cities that should be preserved as parks, nature reserves, and historic sites or simply as areas of open space for recreation and children's play. The need to preserve or develop such areas might seem less urgent than, say, land for housing. But once an area is built up, it is almost impossible (and very expensive) to remedy a lack of open space. In addition, this affects lower-income groups especially. Households tend to live in residential areas with more open space, and their homes often have gardens. They are much more mobile and so can travel more easily out of the city. And they can afford to become members of the "country clubs", sports clubs and golf courses, and so can enjoy walks, playgrounds and sports facilities.

**Real Estate Market.**

Any analysis of property markets should first of all take into account the physical and legal aspects of property and its explanatory role in the urban development process. First of all, the physical quantity and quality of the existing property stock are important factors in urban development. The durability of property dictates that the existing stock will dominate the market and that much of the built environment must be regarded as given. Since the existing occupation of space is the result of development decisions taken in the past, often reflecting considerably different circumstances, varying degrees of physical mismatch can be expected: the property market is characterized by persistent disequilibrium and cycles of oversupply and undersupply (D' Arcy and Keogh, 1999). Mismatches may arise in absolute terms, e.g. there is too little stock to meet current needs, or moreover they arise in relative terms, e.g. intensification of use when there is insufficient stock. As such, physical mismatches affect the economic performance of firms operating in these circumstances and, consequently affect the competitiveness of cities within the urban system.

Another important factor to take into account is the prevailing pattern of property rights which those buildings embody. The building stock can better be seen as a stock of legal interests which serve a variety of use and investment objectives which makes property both a productive resource and a store of wealth. This follows from the fact that property rights are a 'bundle of rights' from which certain 'sticks' can be split-off, e.g. development rights from ownership rights (Eggertsson, 1990: 34). The permissible relationships between ownership interests is regulated in general by legislation such as property law and the rights of owners may in addition be restricted externally through planning or compulsory purchase legislation, also known as attenuation. In principle, the specific structure of property rights should be easier to change than the physical stock of buildings, at least in the short or medium term.

In the property market sustainable markets will be a necessary condition. Drawing on Jones and Watkins (1996) sustainable markets can be defined as a combination of prices being achieved without public subsidy and the ability of the market to sustain itself through downturns in the property cycle. The adequate property supply constraint implies also that there is sufficient choice and availability to meet demand. The sustainability of property markets has implications for the nature of urban form and its elements, and this in turn causes interaction with other sectors of the urban economy.

**Role of Spatial Real Estate Markets**

The operation of local real estate markets, is set within a framework of transport costs (that determines accessibility relationships) which in turn is dependent on the transport infrastructure (Alonso, 1964). Given that transport infrastructure is a key

element of urban form then real estate markets can be shaped by transport policies. Thus for example Dunse and Jones (2005) show how the pattern of industrial rents in the Strathclyde sub-region of Scotland rise with closeness to the major road network. On the other hand the operation of the property market in the absence of planning determines the spatial pattern of land use, the density of development, the characteristics of the built environment and layout. The real estate market is therefore a key determinant of urban form including its spatial dimension.

Positive planning to achieve a specific/sustainable urban form therefore must centre on transport infrastructure and shaping the property market. Policies seeking to modify property market processes can attempt to determine land use patterns through zoning but sustainable land use markets remain a condition of viability. Given that planning controls can bring costs (Cheshire and Sheppard, 1989) in terms of higher prices and consequent equity issues to succeed in this task it is essential to understand the operation of these markets, not only within urban areas but also at the inter-urban level. Positive planning to achieve a specific/sustainable urban form therefore must centre on transport infrastructure and shaping the property market. Policies seeking to modify property market processes can attempt to determine land use patterns through zoning but sustainable land use markets remain a condition of viability. Given that planning controls can bring costs (Cheshire and Sheppard, 1989) in terms of higher prices and consequent equity issues to succeed in this task it is essential to understand the operation of these markets, not only within urban areas but also at the inter-urban level.

### **Institutions, Transaction Costs and Real Estate**

Assembling the necessary site for redevelopment is dependent upon the ability of the developer to acquire and control all the property rights and therefore, development proposals may be constrained by the actions and behaviour of owners (Adams, 1996). Ownership or property rights are the rights of the individual in relation to ownership, use and exchange of an asset. The nature of the right, whether private or held in common with others, affects owner choices in the control of the asset. The nature of the property right and the degree of control is therefore, an important consideration in a transaction, particularly given the opportunity to put the asset to a more valuable use (Eggertsson, 1995). Property rights do not necessarily remain constant, but may be changed as economic conditions change (Barzel, 1997). The concept of examining the costs incurred in a transaction of property rights originated with Coase (1937) followed by the other authors (Williamson, 1985; North, 1990; De Alessi, 1991; Furubotn and Richter, 1991; Barzel, 1997). In his analysis of transactions, Williamson (1985) identified five elements of a transaction, which he defined as the characteristics of uncertainty, frequency and asset specificity and the behavioural assumptions of bounded rationality and opportunism, all of which create friction and affect the cost of a transaction.



The costs in relation to a specific transaction will be determined by the particular circumstances and institutional arrangements and are often categorised into those relating to search and information, negotiation and decision-making and supervision and enforcement. But as Hong (1998) notes, Williamson (1985, pp. 390-1) recognized that, in practice, transaction costs are not always measurable. Institutions or “the rules of the game” (North, 1990) are transaction governance systems or arrangements, designed to reduce the imperfections and uncertainties which increase the cost of interaction in the market. The study of institutions is important since, as Seabrooke et al. (2004) argue, they create a “public ordering context within which private ordering decisions occur”. Although North (1990) suggests institutions are devised to reduce uncertainty and provide structure for society there may be no rationale for the prevailing institutional structure (Ball, 1998).

A review of the literature provides a number of explanations as to why inefficient institutional arrangements may exist, including the complexity of relationships and the high costs of effecting institutional change (North, 1990), the reflection of influence and power within society (Keogh and D’Arcy, 1998; Foss, 1995). But institutions change, as groups identify that existing institutions ignore benefits which could be secured by different arrangements and lobby Governments to alter the framework (Feeny, 1988). Hence the choice of institution is determined by the desire to minimize transaction costs. Real estate markets are generally regarded as both institutionalized and inefficient. They are highly complex entities but weak transparency, substitutability and adaptive elasticity are all sources of uncertainty resulting in high transaction costs. In this case, using Williamson’s (1985) approach of transaction characteristics and behavioral assumptions, an examination of the transaction costs of land assembly allows for a later assessment of the effects of the new legislation. In terms of land assembly, all Williamson’s transaction characteristics will have a substantial effect on the cost of transaction.

Uncertainty is important since it occurs as a result of an individual’s limitations in knowledge and information in relation to both the asset and the preferences and information of the other party. The higher the element of uncertainty the higher the transaction costs that will be incurred. The introduction of new institutional arrangements will, at least initially, increase the uncertainty of the operating environment and, until “operationally” tried and tested, may add rather than reduce uncertainty to the process. Frequency may also be an issue in terms of land assembly, since the circumstances of each transaction will be different, and if large scale or high value may also be relatively infrequent. Acquisition of land in site assembly transactions is also highly asset-specific and, given the high value and competitive nature of real estate development, Williamson’s behavioral assumptions of bounded rationality and opportunism will be demonstrated in the land assembly process.

Transaction costs in the land acquisition or assembly process involve searching and analyzing information as to site availability, ownership and property rights and the institutional arrangements, since if the latter are well defined and understood, transaction costs will be lowered but, if either is poorly defined or in the process of being changed then there is greater uncertainty. Depending upon the nature of the property rights, negotiating an agreement between the parties may be a relatively speedy and straightforward process, but, in the case of assets held in common, the likelihood of hold-ups increases since each individual has to accept the proposal and as Olson (1965) notes, individuals in larger groups may group together only when it is in their personal, rather than collective, interest to do so. The enforcement of exchange normally falls within the rule of law, but existing institutional arrangements have resulted in an expensive system of adjudication. All these factors affect the cost of any transaction of land assembly, making redevelopment in these circumstances a more costly and less attractive option.

### **Urban Land Market**

Traditionally, the urban structure approach of land price dominates the main philosophy of land price approach. This is illustrated from the works of Wingo (1961); Alonso (1964) (differences in location are treated by varying the price which consumers are prepared to pay for the land); Muth (1969); and Mills (1972) (differences in location are treated by varying the price which consumers are prepared to pay for the product of the land). These approaches concentrate on one major factor as the determinant of land price, namely transport costs or the so-called cost of friction. Hence location from the urban centre becomes the main independent factor on which willingness to pay for a particular piece of land at a particular price level depends. As a result, the closer to the city centre, the higher the rent a user is willing to bid when economic activities depend very much on meeting the customers as soon and as frequently as possible.

Alonso systematically absorbs different theories on land value, including the basis from Ricardo's theory of rent, and applies them to explain the relationship between land value and land use from a locational perspective and in an urban context. He puts forward a mechanism which explains the market solution of various users of land by estimating individual bid-rent behavior. This stems from the basic philosophy that land value is a residual amount of the economic activities carried out on and above land. Due to the immobile and heterogeneous nature of land as well as its limited supply, not every user can enjoy the most favored land, and hence marginal land has to be brought to use. It is under such circumstances that land rent becomes payable. What Alonso suggests is that the core determinant of land value depends on the locational differences.

It is also this point that draws most of the weakness in the model. This is because the assumptions incorporated in the model do not seem to match the modern world

situation. They include the assumption of a featureless plain on which all land is of equal quality and ready for use without further improvements. It is also assumed that both buyers and sellers have perfect knowledge of the market and are unhampered by legal or social constraints. In an economy where some activities are still centrally planned, it becomes even more doubtful whether transportation is the only factor that affects land use activities, and hence land value (Needham, 1981).

Nevertheless, it provides a useful structure for analysis of the relationship between land use and land value, i.e. whether land value is determined by the profitability of the particular land use on and above the land. Due to the unrealistic assumptions of the traditional urban structure approach, the logic that land price depends mainly on distance from the city centre was subsequently subject to question when researchers tried to explain the land price behaviour from a perspective other than the location factor, such as the supply-side effect (Needham, 1981). There are therefore more attributes to the determination of land price than just locational convenience in a modern urban economic context. Due to advancement in technology, especially in the areas of telecommunication, and the growing complexity of the structure of the land market, new factors affecting land price behaviour have emerged in the market. It is therefore necessary to look at the land price behavior from new perspectives.

Hidano and Yamamura (2004) analysed land price changes in a much more mature market, Japan, by means of a hedonic pricing model. They found that among other variables, industrial investment activities and lending behaviour by the banks accounted for a major impact on land value changes, and also noted the importance of obtaining adequate and reliable market transaction data for any robust analysis. In examining the duo land market behaviour in China in the pre-2002 era, Yao (2002) applied a hedonic pricing model to examine the price discrimination phenomenon in Shanghai at a time when Shanghai had two separate land markets, one for domestic purchasers and one for foreign investors. She concluded that implicit land prices existed in the market, but weakened over time as market reform progressed. Kim (2004) on the other hand examined real estate price changes in Vietnam where there is not yet a proper property rights system. She applied a hedonic pricing model to decipher changes between a set of variables and real estate values and concluded that multiple ownership of property rights was a major force in shaping market prices in real estate in this market.

Lewis (2007) analyzed urban residential land price data in Jakarta using a non-linear regression model. He found that the effect of distance on residential land prices was negatively significant, though the level of significance reduced over time. In addition, he emphasized the importance of using actual land prices over the appraised land values, as adopted in some previous studies, since the use of actual market land prices significantly influenced the impact of other market variables in his study. Haughwout et al. (2008) also analyses actual transaction land prices in

New York using a linear regression model. They came to the same conclusion - that land prices in New York also had a significant negative correlation with distance to the Central Business District (CBD). They found this especially true for residential land prices as “good” residential locations command a special premium in New York. Ding (2004) examined the characteristics of urban spatial changes in Beijing. He concluded that urban development patterns in Beijing closely resembled those in other cities where a market mechanism was in place. However, he cautioned the reliability of data in this market. Similarly, Zheng and Kahn (2008) by examining the land price changes in Beijing between 1991-2005 and other exogenous factors such as transit infrastructure and environmental impacts, also concluded that the classic urban monocentric model’s predictions were largely upheld in Beijing.

### **Decisions of Developers in Real Estate Development**

Developers typically are businesses (but can also be institutions, governments, and individuals) that convert land from one use to another. Businesses do this conversion with the aim of generating a profit. Most projects start with vacant or agricultural land and end up as new homes, offices, stores, and other buildings, but some projects recycle land and/or buildings to another use. Before building anything, developers go through a multistage process of estimating the feasibility of the project, lining up lenders and participants in the process, and working with the appropriate governments to obtain needed permits. Developers may start with land and seek to find the right product, such as an office building, retail spaces, flexspace, or housing, to build on that site. More frequently, developers may have a product they want to build, such as moderately-priced single-family housing, and they are looking for the right location. Either way, they must decide what to build and where to build it based on their assessment of what households and businesses want. In making these decisions, developers (and their lenders) weigh the price they expect to receive for the product (either selling price or rental prices) versus the cost of producing the product (Landis, 1995; Miles et al., 1996).

These decisions depend in part upon the types of developers in the region. Developers vary in size, with some building a few homes a year and others hundreds of homes or diverse products. Some developers build only one or two products, and this limits their decisions to the type, location, and quality of these products. Other developers may build all kinds of projects depending upon clients wishes and market conditions. These developers have more complex decisions to make about what and where to build. Because the vast majority of land in urban areas is devoted to residential development, they have the most extensive land use impacts. The decisions developers make about what type of housing and where to build it determine where most development occurs in a region. However, non-residential developments have more specific requirements and constraints on where they are viable. Non-residential development typically outbids residential development for the sites that best serve their needs, unless land use regulations prohibit them from

developing at these sites. Development does not occur unless there is demand for it. The regional economy and the types of changes occurring within that economy are major determinants of demand for new buildings. Demand is obviously greater in a growing region than in a stable or declining one. But even within a stable or declining area, changes in household sizes, incomes, or lifestyles or adjustments in the types of businesses produce demand for new development.

In addition, some structures become undesirable, uneconomical, or obsolete. They are vacated or demolished, and when it is profitable, new development replaces them. Developers conduct formal or informal market analysis to determine what type of product (e.g. upscale houses on large lots or starter homes on smaller lots) will sell. The market for different types of development depends on the population, employment, and income trends in communities and the nature and amount of development that has already occurred.

## **Factors considered by Customers in Purchasing Houses from Private Residential Development Projects**

**W.T.L. Fernando<sup>1</sup>, P.C.Kaluthanthri<sup>2</sup>**

<sup>1</sup>Undergraduate, Department of Estate Management and Valuation, Year IV

<sup>2</sup>Senior Lecturer, Department of Estate Management and Valuation

[tharindil@yahoo.com](mailto:tharindil@yahoo.com) , [prathap@sjp.ac.lk](mailto:prathap@sjp.ac.lk)

### **1 Introduction**

A human carry basic needs such as food, clothing and shelter. Shelter is one of them which come under basic needs of a human, where Maslow has mentioned in his hierarchy of needs. When shelter is considered as a basic need in the past this need was limited and was very narrow. But in the present it has been very broad and complex which has given arise to many wants due to changes in housing market trends. So, as a result of many developments in property market in the global context and adaptation of those developments in the local context has given many options to house buyer to select their basic need of shelter as per their wish.

Past analyses shows a significant evolvment in Sri Lankan property market in the segment of residential property. Due to scarcity in land change in social and economic patterns in past few years has led to take many forms in residential development (ranging from a typical house to a flat, apartment or a condominium) and a need of a residential developer to manage property related activities and services and as a result housing development projects emerged in Sri Lanka due to evolvment in Sri Lankan property market.

New trends in residential development arise due to scarcity in land resource and mainly as a solution for busy life style in people where residents preferred to get services from another party (maintenance, security, etc...) than doing by themselves. So this gave birth to residential developers and residential development projects which emphasized their success will depend on proper identification of factors considered by each type of house buyer in order to cater their requirements successfully which will influence to their buying decision. Housing projects were implemented by many developers to cater to a market where residents seek for many services (sports and recreational facilities, maintenance and utility facilities, security, etc...) which are more than constructing a building.

Recent market trends reveals that there is a higher demand for houses from house buyers developed by housing developers but it's absorption rates has reduced and a housing shortfall is prevailing in the market even many residential developments occurred in recent past which shows a low occupancy rate. For this situation many reasons might be behind but one reason could be poor identification of factors

considered by house buyers by housing developers or due to lack in knowledge on factors to consider by a house buyer in a purchase of a house from a residential project.

This study will provide an idea to all the customers on factors to be considered by a customer when purchasing a house from a housing project and more specifically to a referred group of customers. And also it will provide a guideline to all housing developers on the factors considered which needs their attention when implementing a housing project. This will support residential property market developments and to act efficiently where both developer and the customer is satisfied.

Therefore this study will identify the gap pertaining between the house buyer and buying decision and going to minimize it through the conclusions and recommendations of the study. This research study will educate the house buyer as well as the house developer on factors considered by house buyers in a purchase and it will knowledge the house buyer on factors to consider and developers to pay attention on these factors so that their residential developments will have higher absorption rates and higher occupancy rates increasing developer profit and reducing payback period while providing maximum customer satisfaction.

## **2 Literature review on Concepts and variables**

### *2.1 House as a durable good*

Empirical research conducted in the field of durable goods purchase behavior is useful for at least two reasons: (a) a house is the most important durable goods in the household (Hempel and Punj, 1999), and (b) many studies of consumer decision-making concerning cars or household appliances indicate that there are similarities among the buying processes related to different durable goods (Punj, 1987)

### *2.2 House as a Real Estate product*

House i.e. a land bound real estate, can be identified as a consumer durable product. One may purchase such a real estate, a house once in his/her life time. Therefore, this is a very particular and crucial buying decision taken during his/her lifetime. Hence, a real estate buyer pays more attention and involves in a high intensive search of information regarding this particular product in making a purchasing decision rather than purchasing other products. At one extreme of the decision process, amount of deliberation and importance are very high in the housing purchase (Harry, 1976, p244. In fact, real estates, specially housing, is an elusive product (Mendes, 1995, pg3). Since housing fulfills one of the basic needs of a human it is more than just a product.

Housing encompasses all the auxiliary services and community facilities, which are necessary for the well being of humanity, as cited by Sumanasekara (1996). On the

other hand, the so called housing product is a very peculiar commodity when compared with other types of goods and services.

### *2.3 Housing Market and Development*

According to Harvey (1973), there are numerous and diverse actors in the housing market and each one has a distinctive way of determining use value and exchange value. They are as follows:(1) The Occupiers, (2) The realtors (estate agents), (3) The landlords operators (4) The developers, (5) The financial institutions, and (6) The government institutions. On the other hand, as the supply of the public housing would remain very low in comparison to the overall demand for housing, the market forces come into play to meet this demand. Allen and Hamnett (1991) have pointed out that the following elements may usefully be incorporated into a theory of spatially discontinuous housing markets. Firstly, in a market situation the relationship between producers and consumers is a reciprocal one and both sides of the 'market' influence the actual outcome (the market must have numerous buyers and sellers of housing services). Further, they have noted that an understanding of the housing market structure should start with housing production, not housing consumption. Such an approach stands in contrast to Rex and Moore's (1967) housing class model which focused essentially on housing consumption rather than housing production. It also provides a strong antidote to 'consumer-led' concepts of market relationships. A 'supply-side' approach to understanding the origins of housing market segmentation not only refers to the physical aspects of housing provision – the numbers and location of housing, its type, size and the standard of provision, etc

Secondly, the role of bargaining between producers and consumers is essential to an understanding of the housing market situation. Thirdly, ability of certain households to compete in the housing market is clearly affected by discrimination, most obviously on grounds of race or ethnicity. Fourthly, space plays a crucial role in housing market processes, quite simply because housing involves the consumption of land. Fifthly, we need to understand the housing market as a dynamic process, one that is constantly changing in response to changes in the structures of provision and the characteristics of demand (Niriella, 2015).

As a result of house became a product, and influence over time made a house which is not only used for survival, but a product which fulfills security, social, esteem and self actualization needs. This situation gave arise a need of many parties to build a house to a recognized standard. According to Ariyawansa (2009) no one could his/her own residence alone at such standard. Hence, he sought help from the neighbors. He also stated with change in time people were pushed into a highly busy life style which led to limit their lives to a specialized frame of routine. This evolution made to get their houses entirely done by someone else or to prefer a



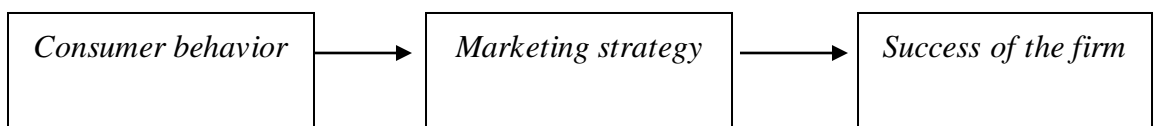
house which is already built leading to a lucrative industry throughout the world at present.

Rathnayake (1991) reveals some information on “Private sector housing in Sri Lanka”. According to that people prefer to purchase built houses than to engage in the complex construction process due to time constraints and lack of knowledge about the construction process. There was a boom period for the property development sector in Colombo. Several important features in the private sector property development activities during this period have also been identified. One was the rapid increase in the number of property developers, especially in the city of Colombo, and its suburban areas. They were either public or private companies, limited partnerships or individuals. The other characteristics were the increase of land sub-division schemes and sales of building and residential blocks in Colombo and its suburbs. Some of the companies, involved in the earlier largely land subdivision schemes, turned to the housing development activities this period (Niriella, 2015). In the mean time some real estate companies in the country are constructing houses for target markets in different scales which were not up to the expected level for the customer (Ariyawansa, 2009).

Rathnayaka’s research paper (1991) pointed out about 25% of interviewed house buyers were not satisfied with the house they bought and also the paper says that the private sector housing companies do not provide efficient service to the target market. Therefore, a need of thorough understanding about the consumer behavior arose.

### *2.3 Consumer Behavior*

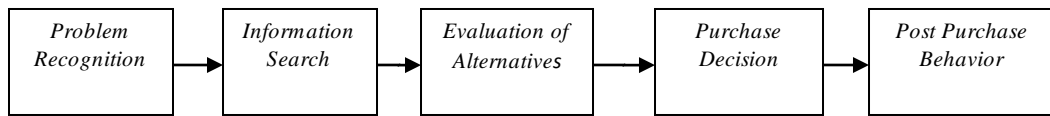
The consumer behavior refers to the purchasing decision of a particular product or a service. Purchasing decision is, in fact, a highly complex one, and subject to wide variety of interrelated economic and behavioral influences (Modern, 1991, pg.147).



Ariyawansa, 2009

Consumer is a living creature. His internal things as desires, expectations, and attitudes, etc..... are highly subjective. On the basis of this internal situation, he learns and gets experience from the external environment. Then having reformed the initial base, he tries to perceive elements of the environment (Ariyawansa, 2009). Since, consumer behavior is influence by internal and external characteristics in the macro environment. Therefore, the influential factors must be properly identified to

have a proper understanding about the consumer behavior where consumer behavioral models will come into place.

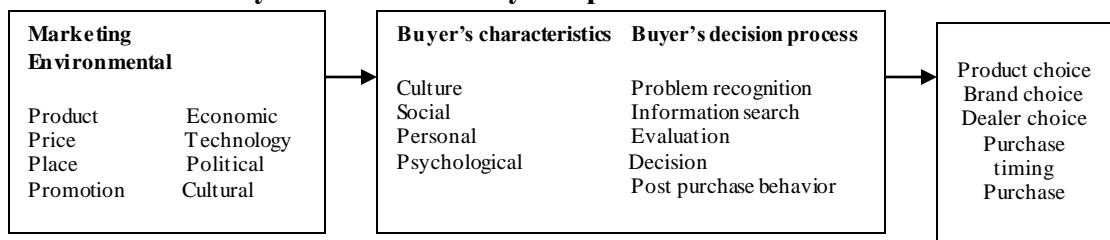


Source: Kotler (1999) pg.179

“Five Stage Model” will explain the way of buyer acting in the market and it emphasize on a situation of a complex buying behavior, where a high weight in the process is given in searching information regarding the purchase.

This model can be applied to identify only the “buying decision processes” even in the housing market similarly to the other goods to a greater extent. This model describes that one, who has a need, tends to find ample of relevant information so that he/she can make a correct buying decision (Ariyawansa, 2009). This model will only explain buying decision process and cannot be utilized to understand a specific consumer behavior related to complex products such as house.

**Outside stimuli Buyer’s black box Buyer’s purchase decision**



Source: Kotler (1999) pg.161

“Black Box Model” recognizes the unknown facts which lie between the outside stimuli and buyer’s purchase decision. This diagram depicts the buying decision process and a number of factors which determines the buying decision. These factors indeed can be identified as a set of “general determinants of a consumer’s purchase decision (Ariyawansa, 2009).

This model can be used to develop a conceptual framework since this framework has identified some general factors influencing buyer behavior. Therefore, these general factors can be used to determine specific factors influencing customers in purchasing a product like house which is already built by a housing developer.

#### *2.4 Purchase decision*

Customer behavior is an important research topic for recent decades. “There is also a clear shift from rational factors to psychological factors and to social decision factors” (Bargh, 2002). Besides, there is a link between the “intention to purchase” to “decision to purchase” of customers, especially the decision related to purchase real estate (Ajzen, 1991,; Han & Kim, 2010,; Kunshapn & Yiman, 2011,).

Purchase decision is multidimensional. The first dimension is the increase in the spending power. The second dimension is growth in spending pattern shift from nondiscretionary to discretionary spending. The third dimension is growth in the shift of this spending from informal economy with individual traders to formal economy with organized businesses. The fourth is growth in number of first time buyers. The fifth is growth in the shift of consumers from most scattered hard to access rural markets to most accessible and concentrated urban markets. And above all the most important dimension is the sensitivity of the modern consumers with modest incomes and changing demands.

The consciousness of this vulnerable consumer is outcome of the socialization process. The socialization is outcome of exposure to various environmental stimuli. The environmental and marketing stimuli enter the consumer’s consciousness. (Phillip Kotler, 2007) This consciousness gives birth to a set of psychological processes that gets combined with certain consumer characteristics to result in decision processes and purchase decisions. The most important environment for marketers is economic environment of the market. Choice is the most fundamental problem of life in economic environment. (Seth, 1961)

The choices can be divided into two parts viz. economic choices and non economic choices. The economic choices are no doubt very important but that does not mean non economic choices are worthless. For example an economic choice of spending more time in office is an important choice but that does not mean spending time with children although non economic choice but not worthless. An economic choice may also be called as economic decision. An individual living in modern economy has to take several decisions daily mostly economic in nature. Every economic decision involves a decision between alternatives; The basic reason for this being the scarcity of means and multiplicity of ends.

Resources are scarce but the ends to which they can be put are numerous. The economic decisions are divided into three types; i) Private Decisions, ii) Business Decisions, and iii) Community Decisions (Seth, 1961). The private decisions vary according to the tastes, habits and personality of the individuals. The business decisions which are made by 72 business firms mostly vary according to the business objectives considerations, subjective elements in the businessmen’s mind and the business environment. The community decisions which are made largely by

the representatives of the community are influenced by mostly the availability of resources and urgency at the ends.

*2.5 Factors considered by customers in purchasing Houses from Private Residential Development Projects.*

Residential development emerged as a result of change in consumer behavior and requirements over period of time, which gave rise to residential development projects established by a developer, in order to provide many conveniences to the customer which led the market to identify a new product call house. As a result of customers identifying a house as a product they started to compare to receive maximum value for money which gave rise to identify factors considered by a buyer when placing the purchase decision.

**Variables of Buyer Preference in Residential Property**

<b>Property Physical</b>	<b>Distance</b>	<b>Environmental/Location</b>	<b>Financial</b>
-House size	-Distance to work	-Condition of neighbourhood	-Interest rate
-Number of bedrooms	-Distance to school	-Attractiveness of the area	-Maximum mortgage (absolute amount)
-Number of bathrooms	-Distance to local shops	-Steepness/topography of the land	-Maximum monthly repayments
-Accessible garage	-Distance to shopping centre	-Attractive views	-Ratable value of the house
-Low maintenance	-Distance to central business district	-Open space	-Length of time house was on the market
-Interior décor and design	-Distance to amenities	-Vacant sites nearby	
-Manageable garden	-Proximity to amenities	-Traffic noise	
-Well built	-House on a main bus route	-Security from crime	
-House type		-Quality of schools	
-Layout of accommodation			

**Source:** Adapted from Daly et al. (2003); Adair et al. (1996)

From a buyer’s point of view the demand for a real estate is based on a wide range of considerations such as standards, attitudes and objectives of individuals, family, business firms’ government officials and others (Weimer, 1960,. The demand for residential real estate largely a reflection on consumer’s income and the principal demand factors are the trends of employment and incomes of the potential customer group and the terms and availability of financial (Weimer, 1960).

Residential Real Estate Purchase Decisions in Australia: Is It More Than Location? (2009) has stated Affordability, maintenance and interior design, and a good neighborhood is considered as most important. Location is important in the sense of neighborhood and community, rather than prestige. Other research employs a content analysis of American and British valuation, and econometric literature which yield 55 variables that are categorized into four groups; namely, property, distance, environmental and financial characteristics (Adair et al. 1996).

Even 55 variables are considered in the above table it has not included any psychological, legal and social factors which needs to be included since it plays a major role when deciding customers purchase decision.

Roulac (2007) has attempted to argue that the idea of branding can be applied to luxury properties and that brand, beauty and utility are three characteristics that buyers seek. Residential Real Estate Purchase Decisions in Australia: Is It More Than Location? A (2009) research finding has stated that the external property-scape is what a buyer would see on inspecting the outside of the property or viewing photographs. The size and configuration of the property include the standard information provided in advertisements on the number of bedrooms, bathrooms and car spaces. Features consist of a pool, air-conditioning and so on. The final factors are appearance and maintenance, and interior design.

Other factors are labeled wider positioning in terms of transport, central business district (CBD) and other general amenities and community distance, meaning proximity to local schools, shops and work places. Other factors are topography, a good area/neighborhood, location in the sense of affluence and quality, and green/environmental issues. The other main factor is lender constraints on finance for purchase or borrowing/affordability with timing being the second factors are labeled access and compatibility and water/views/roads. Items within the remaining characteristics form each labeled psychological and evaluation respectively. Therefore, a purchase of residential houses is based on several factors but in this study only attention was made to identify physical factors considered by a customer who is primly considered by a customer and has not placed any importance on other factors which shows biasness.

Phan Thanh Si (2012) stated some factors to be considered by a customer when placing their house purchase decision.

Firstly, “features” of the building structure itself is an important determinant of a household choice of residence (Quigley, as cited in Haddad, 2011). Also, it is confirmed that “feature” has significant effects on customers’ house purchase decision making (Sengul *et al.*, 2010,. The “feature” of house includes “design”, “house size” and “quality of building” determinants relating to decision making to

buy a house of an individual (Adair *et al.*, 1996; Daly *et al.*, 2003; Sengul *et al.*, 2010; Opoku & Abdul-Muhmin, 2010).

Secondly, “private living space” is one of most important factors affecting to “consumer housing decision”. Living space consists of “size of living room”, “size of kitchen”, “quantity of bathrooms” and “quantity of bedrooms” (Opoku & Abdul-Muhmin, 2010). In addition, it is accepted that there is relationship between the “space customer” and customers’ purchase making process (Graaskamp, 1981).

Thirdly, “financial” status is much significant to customer house choice (Hinkle and Combs, 1987, p.375; Kaynak & Stevenson, as cited in Sengul *et al.*, 2010). The “financial” element of real estate requires access to a relative large amount of “capital” and as well as “borrowing costs” (Xiao & Tan, 2007). In addition, “financial” status bases on combination of “house price”, “mortgage loans”, “income” and “payment term” (Opoku & Abdul-Muhmin, 2010; Yongzhou, 2009,). Haddad *et al.* (2011) finds out the “economic” factor which is consisted of five variables, such as “income”, “interest rate”, “area”, “conversion” and “taxes”. Moreover, Adair *et al.* (1996, p.24) and Daly *et al.* (2003) group “interest rate”, “maximum mortgage”, “maximum monthly payment”, and “length of time payment” into “financial” factor.

Fourthly, one of the most important factors affecting individual “decision” making to buy a house is “location” factor (Kaynak & Stevenson, as cited in Sengul *et al.*, 2010, p.219). The “residential location” has an influence on “people’s housing choice” (Zabel & Kiel, as cited in Opoku & Abdul-Muhmin, 2010). Distance to choose house can be affected by “width of adjacent” and “location to school” (Opoku & Abdul-Muhmin, 2010). Moreover, “distance to central business”, “distance to school” and “distance to work” are considered (Adair *et al.*, 1996). In addition, “access to recreational facilities” and “access to main roads” are proposed (Iman *et al.*, 2012).

Fifthly, “environment” including “neighborhood”, “area attractiveness”, “view”, “noise from around districts” and “general security” is stated as one of the determinants of a household’s residential decision (Adair, 1996). It is confirmed that “environment” has a big influent to housing buyer (Tajima, as cited in Opoku & Abdul-Muhmin, 2010, p.224) and it is agreed by Morel *et al.* (2001). Particularly, “neighbourhood” quality is paid intention highly to house purchase decision making of customer (Gabriel & Rosenthal, 1989).

Demographic” characteristics of customers are internal factors related to decision making (Mateja & Irena, 2009). “Demographic” characteristics consist of the individuals in term of “gender, age, educational status, marital status, career, the quantity of family members and children, as well as the residence property”.

“Demographic” characteristics consist of age (Yalch & Spangenberg, 1990), education (Gattiker *et al.*, 2000), income level (Dawson *et al.*, 1990), gender (Zhang *et al.*, 2007) which are factors influenced on the “purchase intention” of customer. Particularly, “gender” has significantly influence on the financial feature of the house (Sengul *et al.*, 2010). It is also confirmed that there is a significant difference in real estate buying decisions to “age” and “gender”, and not to “educational levels” and “marital status” (Haddad *et al.*, 2011). Correspondingly, in this study, “gender” and “age” characteristics are considered as control variables so that investigate whether effect of those demography variables on housing purchase decision making of customers or not. It shows that there are main factors which is considered by a customers as well as sub factors which comes under main factors which are considered by a house buyer.

Another factor is attitude, is the person’s favor or disfavor toward an action (Tongletet al., 2004, Al-Nahdiet al., 2008; Al-Nahdiet al., 2009). According to Ajzen, etal, attitude is defined as a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor (Ajzen&Fishbein, 1980). Attitude is one of the determinants that affect individual behavior (Gibler and Nelson, 1998), attitude influences consumer intention to purchase durables (Chung and Pysachik, 2000; Summers et al., 2001), and attitude influences consumer intention to purchase a house (Phungwong, 2010; Numraktrakul et, al., 2012).

Social and cultural factors play a significant role in the relative importance of housing preferences which are determined by religion, kinship, and social relations (Jabareen, 2005). Consumers’ perception of social pressures put on him by others to purchase a product (Phungwong, 2010) are friends, parents, political parties, and/or an agent involved in the purchasing decision (Kalafatiset *al.*, 1999). It was found that external factors influenced the purchasing process, e.g. external factors like reference groups and family influenced the purchasing process of a custom made prefabricated house (Koklič& Vida, 2009).

Finance is also a highly important factor for customers to consider when purchasing housing (Hinkle and Combs, 1987; Kaynak& Stevenson; Si, 2012). The financial factor requires real estate purchasers to borrow large amounts of money and to pay premiums for borrowing. This price premium is used as an indicator of consumer willingness to purchase a product (Numraktrakul, 2012). Paco and Raposo (2009) found that financial factors sometimes had the highest influence on decision to purchase products.

**Table 2 important factors considered by customers in a Residential Property**

Feature of house	Private living space	Financial status	Distance	Environment
House size	Kitchen size	House Price	Width of	Neighbour's
House's legal status	Quantity of bedroom	Maximum mortgage	adjacent Street	condition
Interior design	Quantity of bathroom	Maximum monthly	Distance to work	General security
External design	Living room size	repayment	Distance to market	View Noise
Construction quality	Storey of house	Interest rate	Distance to school	Pollution Nearby
Construction duration		Payment duration	Distance to recreation centre	Traffic
Type of house		The registration fee	Distance to the central	

Saw Lip Sean<sup>1</sup> & Tan Teck Hong (1985) stated factors affecting to the purchase decision of a house by a customer.

**Locational factors**

Good location attributes are generally linked to the proximity and accessibility towards local amenities such as school, shopping malls and transportation centers (Clark et al., 2006; Kauko, 2007; Levine, 1998; Tan, 2011b). Elder and Zumpano (1991) argued that the price of land and house is reflected in good locations or areas that are near to schools, shopping centres and public transports. Daly et al. (2003) claimed that the location has a major impact on buyer's preference in purchasing residential properties in Australia, UK and Ireland. Distance is described as a factor that affects buyer's preference in the decision making of property buyers, such as distance to the workplace, schools, shops and central business districts (CBD). The distance to home from the workplace is largely considered when choosing a property to invest in. Karsten (2007) and Tu and Goldfinch (1996) stated that the distance from the workplace has been found to affect household choice among residents preferring not to spend too much time travelling to work. Furthermore, Kauko (2003) identified that location has a strong correlation with the increment of property value and behaviour in property investment.

**Neighbourhood factors**

Choguill (2008) defined neighborhood as a space in which residents live together for a common interest. As stated by Tan (2011a), a home that is situated in a good neighborhood would be preferable as households are willing to pay more for the



house with good indoor and outdoor environmental qualities. Studies by Chapman and Lombard (2006) and Tan (2011a) stated that neighborhood environment, such as cleanliness, pollution and crime are important factors before deciding on the purchase of a property.

#### Structural factors

Structural attribute considers all physical conditions as well as the quality of the property. The number of rooms or bathrooms in a house is a feature that one considers before making home-ownership decisions, particularly in western countries (Hurtubia et al., 2010). Common structural attributes consist of size of living hall and dining hall, built-up size, and number of bedrooms and bathrooms (Arimah, 1992; Fierro et al., 2009; Laakso & Loikkanen, 1995; Tan, 2012b; Tiwari & Parikh, 1998; Tse & Love, 2000; Wilhelmsson, 2000). It is generally believed that buying a property for own use and buying an investment property has different criteria. Investors generally prefer smaller properties especially apartments and flats because these properties have always been more popular among tenants (Kohler, 2013).

#### Financial factors

The financial attribute is also taken into consideration by property investors. As mentioned by Reed and Mills (2006), several key areas regarding the financials are identified. These include mortgage interest rates, household income, house price, and ability to obtain financing. As an investor, the financials might be the utmost important factor among all factors. This is because the financials are often involved with money in which investors would want to gain from their investment. Even though many factors covered in this research it shows that any attentions on social and psychological factors were not given any consideration.

Ekanayaka and Weerakoon cited the work done by Belching, (2000) on the factors which determine the acceptable residential location. He mentioned different factors which are highly significant in location suitability for residential development such as accessibility, neighborhood quality, environmental Quality, negative environmental influences (pollution, traffic etc), environmental factors (wetland, wildlife, scenic rivers etc), desired infrastructure, reasonable size and design, surrounding uses, excessive traffic congestion and additional factors (historical development, topographical features and size, dynamic changes and, government Policy). Those factors highly affect the residential uses and these factors should be considered when selecting a suitable location. Manivannan and Somasundaram (2010) have mentioned that a buyer will consider a number of factors when purchasing a residential apartment. The major factors are location, building size, type of unit, number of bedrooms, design and layout, amenities, facilities, view, density, developer reputation, promotional efforts, security, and convenience. Other

attributes that may contribute to dwelling choices are workplace accessibility and environmental quality. These factors form the market value of a property.

Customers' perceptions are formed subsequent to their experience of the services received from an organization. Furthermore, the level of previous customer experience with certain services that serve by other firms can impact on customers' perception of service quality. Researchers believe that perception and expectation are strong relative concepts (Parasuraman, Zeithaml, and Berry, 1985; Mersha, 1992; Avkiran, 1994). This has drawn the attention on a very important psychological factor which is consumer perception. Customers' perception results from how customers recognize service quality and future expectations. However, it can be shaped through the influence of other people and through marketing factors which will also influence the purchase decision which was identified by Manivannan and Somasundaram (2010) as follows.

#### Marketing Factors

Each element of the market mix – product, pricing, promotion and place (distribution) – has the potential to affect the buying process at various stages.

*Product:* The uniqueness of the product, the physical appearance and packaging can influence buying decision of a consumer.

*Pricing:* Pricing strategy does affect buying behavior of consumers. Marketers must consider the price sensitivity of the target customers while fixing prices

*Promotion:* The various elements of promotion such as advertising, publicity, public relations, personal selling and sales promotion affect buying behavior of consumers. Marketers select the promotion mix after considering the nature of customers.

*Place:* The channels of distribution and the place of distribution affect buying behavior of consumers. Marketers make an attempt to select the right channel and distribute the products at the right place.

The emphasis on housing factors in the purchase decision is consistent with van der Vlist et al's (2002) study of the Dutch housing market in which factors related to tenure and housing costs were by far the most important in explaining the decision to move house, while employment related factors were very unimportant. It is also supported by Flatau et (2004) in their Australian study of home ownership aspirations. They suggest that housing market arrangement such as stamp duty and the gathering of a sufficient deposit, which can be interpreted as a life course factor, in that it is showing economic progress, are important in understanding the timing of the purchase decision. In this survey, the saving of a deposit was ranked as the second most important factor in the decision to buy, while stamp duty exemption was ranked also in the top ten items (8th). Deurloo et al (1994) also identify the gathering of a deposit as important while Henley (1998) emphasizes house price change as an explanation of the decision to move house. In this study affordable

house prices were ranked first while an expected rise in house prices was ranked sixth. Dieleman and Everaers (1994) highlight interest rates and rent rises as important items in the purchase decision.

Valerie Kupke (2008) concluded in his research that there are important consistencies in the items that have prompted the decision to purchase a first home. Economic factors such as affordable house prices, saving a deposit and low interest rates are important factors for every household irrespective of age, income, or family make up in the decision to buy. Domestic factors such as the birth of a child, relationship change or marriage or even a new job are not considered as important. This emphasis on housing market factors, rather than family, or even employment factors, supports the findings of van der Vlist et al (2002), Flatau et al (2004) and Mulder and Wagner (1988).

Uchenna Cyril Eze and Yih Ying Lim (2013) stated some factors which influence housing purchase decision which is as follows

#### Inflation Hedge

Inflation entails the changes in Consumer Price Index (CPI), which measures the retail prices of a fixed “market basket” of several thousand goods and services purchased by households. Based on Toscano (2007) and Petrov (2008) studies, it is emphasized that inflation rate tends to have no impact on investors’ decision-making for a property.

#### Property Prices

Since most people’s budgets are limited, price is probably the most important aspect in the decision-making process of buying a property (Mattiasson & Rönnqvist, 2009). Irrespective of investors’ nationality, they still tend to perceive property price as one of the determinants of buying a housing property as it involves a huge monetary investment. In addition, it involves the property’s affordability to invest in the market (Shuid 2004; Hood 1999).

#### Disposable Income of Investors

La Paz (2003) discussed the income that affects decision-making as ‘normal’ income and it enables a household (or not) to buy a property. prior research indicate that real income and disposable income can influence investors’ decision-making process to buy a property as they define investors’ capability to afford real estate investment.

Ariyawansa (2007) said that a house presents as a symbol of status/achievement or social acceptance and stimulates capital investment of the people (Sumanasekare, 1996). Therefore, one who wants to buy a house goes through a very intensive search of information so that he/she can verify and buy the correct thing. The

consumer's buying behavior manifests both rational and emotional behaviors (Vipula, 1995). Since a house is a culture specific superlative consumer durable and it influences each and every aspect of a person, who is very keen on factors such as the price, physical condition (quality), design and location, infrastructure facilities, and legal conditions etc; in purchasing a house. Zainuddin, et al (2006) has pointed out six major factors for customer attraction for housing estates as location, design, price, supplier's reputation, quality of product, and services. The other important factor is that buyers find different benefits from a house in a particular time in a suitable space. Hence, a marketer or a manager should first think of the function, time, and required space expected by the customer in formulating housing market decisions (Apgar, 1995). Here, the function implies the benefits expected by the consumer. Time means when it is used. Space is simply the size. The location of the house is a very important factor for the information of the residential property purchaser.

According to Nanayakkara et al (2006) the most significant factor for a customer to select an apartment is the location. Other important factors are facilities, design of the property, regular maintenance and regular supply of services such as water, electricity and proper solid waste management system in connection with apartment housing. Infrastructure facilities, accessibility, healthy environment etc. are centered and interconnected with the location and such variables are highly concerned in purchasing a house. In Sri Lanka, however, private sector houses provide such facilities inadequately (Ratnayake, 1991).

In the case of accessibility the demand behavior of consumers who commute regularly to the Central Business District (CBD) selecting housing and non-housing consumption and residential location subject to a monetary budget constrains capturing the infra-urban area travel (Turabull, 1992). In addition, healthy and habitable environment also depends on the location of the residence. The rich and the middle class people abandon the city limits leaving the poor in the over crowded city areas searching more comfortable survival, as city becomes congested (Saunders, 1990). Thus, the immediate neighborhood is also highly concerned by potential housing buyers. Health, calm and quietness, secure, and privacy etc; are some common expectations for every person in finding a habitable living place. According to the demand pattern of condominium in Colombo, semi luxury apartments are popular among migrant workers, who can buy such unit with their foreign earnings and live peacefully after their return or retirements (Wejeweera, 2003).

A research has found that a situation of a particular kind of neighborhood occupied by particular sort of severely mentally disable clients can make a large, statistically significant reduction of nearby property value, at least in the short run (Golster et al, 1994). This implies that there is a less demand for such properties surrounded by

poor immediate neighborhood environment. “An analysis of house sale surrounding Michigan hog operation areas” has disclosed that the value of a house has been decreased by US\$ 43 for each additional hog within a five miles radius (Pulmquist, 1997). Similarly, the urban residential land values vary considerably due to the environmental quality such as scenic beauty (Prematilake, 1999).

The financial attribute of the buyer i.e. the ability to pay easily is another determinant of the buying behavior. There is a positive relationship between source of credibility and the propensity to buy, which exists only for the high-involvement product and the upper-middle class category (Vipula, 1995).

He also mentioned some attributes widely considered by a customer.

#### Quality of construction

In technical terms, a house is a structure, which comprises of three main components as the floor, walls and the roof. The durability, strength, appearance, cost of construction, maintenance, and all of a housing unit largely depend on the quality of construction of these main three components. Therefore, the quality of material used, the technology applied etc; are very important in this regard.

#### Location

Simply, with regard to a house, the location refers to a place on a given area of surface on the earth. This is important in two aspects. One is the importance of the location in connection with the immediate surroundings, which determines a number of necessities for the living such as facilities, accessibility, privacy, calm and quietness, and the other socioeconomic variables. The other one is, in broader sense, the location differentiates the regional attribute of a house. Whether it is located in a city, village, or in a suburban etc; is very important in today’s housing market.

#### Price

Price still remains as a critical decisive factor in purchasing of many products. For a house as an extreme consumer durable, the degree of importance of this factor is often higher. In spite of the enhanced role of the other non-price factors, the price holds a challenging and critical element in monopolistic competitive markets (Kotler, 1972). Since the housing market is also operating as an imperfect state, likely monopolistic competitive market, the pricing factor plays a vital role in marketing decisions.

#### Design

Just like an augmented product of the housing, the design of a house makes greater influence to the buyer’s choice. This addresses to the psychological needs of the consumer. This helps to differentiate the product easily too.

*Size:* This is of course a kind of expected product of a house rather than the core benefit. Size of the total house or each essential section should suit to the buyers 'needs and desires.

*Facilities:* This is also a kind of expected product rather than the core benefits. Nowadays these are highly considered and demanded. Various kinds of facilities are demanded to fulfill survival needs, security needs social needs, esteem needs or self-actualization needs by a person.

*Legal environment:* This is important in many aspects. Legal transactions are expected by all the civilized societies. Remarkably for real estate product (land and buildings), all the good qualities and aspects depend on the legal feasibility of the product. This is also able to put into the category of product-related factors.

*Neighborhood surround:* All individuals as well as their unique social groups have their own pattern of living. The neighborhood environment greatly affects in numerous ways on personal needs as well as needs of the family, which in fact a very distinct group of the society. The above literature has provided a vast idea on the factors considered by a customer in local context when purchasing a house from a residential development project.

### 3. Findings by authors

These findings are based on past literature.

Thanakon Ratchatakulpat et al (2009) findings displays some analysis on factors considered by a customer from highest to lowest which is as follows.

The major contribution to practice is the provision of substantial guidelines on the factors to be considered in developing effective marketing strategies, defining a strategy for the sale of property based on buyer demographics, and whether the buyer might be purchasing a property for investment compared to live in. Buyers may have different views from agents on what constitutes an investment and such buyers want more efficiency and speed in the buying process. Prospective real estate purchasers are concerned with more than property location. Overall affordability determined by buyer borrowing capacity along with maintenance, design and a good area or neighbourhoods are the main characteristics

<b>Factors</b>	<b>Rating</b>
Maintenance and interior design	5.750
Borrowing/affordability	5.706
Good area/neighborhood	5.702
Size and configuration	5.495
Psychological (image and risk)	5.373

Access and compatibility	5.306
External propertyscape	5.222
Appearance	5.188
Legal	5.108
Community distance	5.047
Green/environmental	4.890
Evaluation	4.867
Wider positioning	4.865
Timing	4.746
Topography	4.705
Affluence/quality	4.666
Water/views/roads	4.586
Features	4.241

Agents should emphasize the maintenance and overall interior design of the property. In terms of location, the factors important to buyers area good area, such as the general standard of the neighbourhood, security and noise. These are live ability requirements rather than prestige aspects, such as water views, affluence, or image. In other words, location is important in terms of the amenity of the neighbourhood, and nearby facilities, rather than an affluent suburb. In terms of contribution to the body of knowledge, the major implication is that the numerous variables which influence real estate decisions can be narrowed down to a smaller set of underlying factors. These factors and their contribution to live in versus investment decisions merit further in-depth analysis.

Phan Thanh Si (2012) research findings shows,

The relationship between the factors and the purchase decision which is summarized as follows.

Hypotheses	Beta	Zero order	Sig.	Results
There is a positive impact of house features on house purchase decision	.003	.167	.951	Positive impact no support for explaining dependent variable because the significant value was above .05
There is a positive impact of private living space status on house purchase decision	.186	.329	.002	Positive impact strong support for explaining dependent variable

There is a positive impact of finance status	.066	.150	.234	Positive impact no support for explaining on house purchase decision dependent variable because the significant value was above .05.
There is a positive impact of distance on house purchase decision	.522	.566	.000	Positive impact very strong support for explaining dependent variable
There is a positive impact of local environment on house purchase decision	-.048	.233 .425	Positive impact	no support for explaining dependent variable because the significant value was above .05

The multiple regression of the study shows that “house feature”, “finance”, “livingspace”, “distance” and “environment” make a positive impact on “house purchase decision”. The research results also shows that there are main 21 items which are included in independent variables of the model affecting decision making to purchase real estate of customers. These findings were shown that “house features” are not consisted of “outdoor space” including “presence of garden” and “size of garden” of Opoku & Abdul-Muhmin (2010, p.223), that can be explained by shortage of land in Ho Chi Minh City in Vietnam. Also, “environment” of research 36 results are agreed with “environment” result of Adair *et al.* (1996, p.22), but there is different with “slope/topography of the land” and “wooded area/ tree coverage” from “environment” variables of Adair *et al.* (1996, p.22). Those differences caused by the tree factor are not paid much attention in Vietnam and many Vietnamese environmental indicators are below average as announced by the World Economic Forum in 2012. The findings of the study show that customer demands with house price less than 20 million per square meter are very much at the rate of 87.9 percent of respondents, and from 21 to 32 million per square meter are 9.1 percent of respondents. Hence, the low-medium income market is very large and need to be concentrated on it. The most priority of customers is single house with small size of 72.6 percent, and the second one is apartment of 21.3 percent. The research findings agree with the result toward the small house of consumers in Saudi Arabia (Opoku & Abdul-Muhmin, 2010).

On the other hand, the results of the study has found that the demography consisting of gender, marital status, education, ages, career and income are not support to explain dependent variable and no difference of customer decision making in the



different multi-group analysis between gender, age, marital status, income and education level. The findings of this study are contrary to Haddad (2011) where there are significant differences in customer decision due to gender and age. It is explained by customers of age less than 36 of the research are at the rate of 99.1 percent. In addition, there is a strict “gender” separation in Saudi Arabia, adjacent Jordan country (Opoku & Abdul-Muhmin, 2010).

Kathrivel and P. Vimalagracy (2014) research findings shows that, The factor ‘Basic amenities’ has been identified as the most important factor, which influences the choice of customers. It clearly shows that the first thing which prospective buyer looks for, are basic amenities like water supply, electricity, sewerage system etc., which are essential to start with living. ‘Financial Factors’, ‘Connectivity’ Factors’ and ‘Layout Factors’ are other primary factors which influence the choice of the customers. Therefore, these factors seek proper attention from the builder. Factors like ‘Proximity’ and ‘Recreational and Leisure’ seem to be secondary factor. However, these factors cannot be ignored at all by the builders. The study has significant implications for the real estate marketers too. When, it comes to the offering of product to the prospective buyer marketers should focus on these identified factors according to the order of preference as found in the study.

Saw Lip Sean<sup>1</sup> & \*Tan Teck Hong<sup>2</sup> (2014) in their research finding stated that, Becoming a property investor is a great way to earn either short or long term financial returns. Finding the right property to invest requires a lot of knowledge and without it the investment might cost investors dearly. According this survey, locational, financial and structural factors prove to be significant at 5% with p-value of 0.026, 0.011 and 0.024, respectively; therefore, these significant factors should be taken into the consideration as far as investors are concerned. However, investors do not really consider the neighborhood of the property they purchase as long as they do not have an intention to stay in these properties.

According to the regression analysis, Locational factor is deemed to be the most important factor on residential property investment decisions ( $\beta = 0.792$ ). the next important factor for investors to look highly upon is financial factor ( $\beta = 0.336$ ). It is because property investment has the largest initial capital requirements compared to other investment vehicles, such as fixed income security and shares. It also has the lowest liquidity among all investment vehicles as they are many procedures for the sale and purchase of property. structural attributes affect investment decisions upon purchasing a residential property. This finding is consistent with home ownership studies, for instance, the study by Hurtubia et al. (2010) who revealed that the number of room or bathrooms in a house is an important feature to be considered by households. Besides that, Hurtubia et al. (2010) stated that households comprising of one to three persons will typically prefer a small number of spacious rooms and on the other

hand, larger families will rather opt for large number of rooms. neighborhood attributes had no effects in investment decisions upon purchasing a residential property, all other things being equal. This study shows that environmental quality is not a factor for investors to look into before purchasing a property to invest in. In contrast, the home ownership study by Yusuf and Resosudarmo (2009) clearly demonstrated the importance of air quality on households' home ownership preferences.

	B	Std Error	t	Sig.
Constant ,	2.225	0.668	3.330	0.001
Locational (L)	0.792	0.352	2.250	0.026
Neighborhood (N)	0.030	0.101	0.295	0.769
Structural (S)	0.215	0.094	2.285	0.024
Financial (F)	0.336	0.129	2.605	0.011

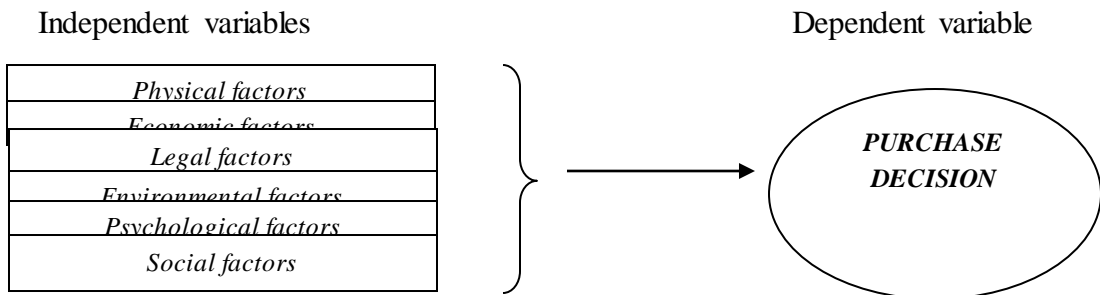
Nor Aini Salleh<sup>a</sup> et al (2014) in their research findings stated as follows. This ranking was determined based on the mean score recorded. The highest mean score will represent the most influence factor and will rank as the first factor. Meanwhile, the lowest mean score will represent the least influence factor. From this table, the first rank of influences factor is view and ventilation factor with a mean score of 4.98. The next ranking is location, followed by price and design. The lowest rank is Feng Shui elements with a mean score of 3.34. The residents and housing industry players should carefully understand the link between lifestyle orientations and residential environments (Mahmud et al., 2012). For this reasons, designers need to consider personal motivations in the housing decision making process (Zavei & Jusan, 2012). Designers should positively exploit the beautiful scenery at the hilly area into the housing design. Thus, influence the property buyer's decision on buying the hillside property. The property buyer will consider several key factors from the property given and created a condition and compare it with the property's price (R.Aswin Rahadi et al., 2012). Among the factors of property given are locations, land shape, physical condition. Meanwhile, the created condition comprises of design, facilities, security traits, and gated or non-gated neighbourhood.

Influences factor	Mean Score	Ranking of influences factor
View and ventilation	4.98	1
Location	4.96	2
Price and design	4.92	3
Prestige, Luxury and Style	4.90	4
Facilities and amenities in the neighborhood	4.78	5

Type of neighbourhood	4.60	6
Feng Shui elements	3.34	7

#### 4.0 Conclusion

According to the above findings based on past literature we can identify many factors considered by a house buyer which can be grouped into few main factors and as sub factors which comes under the main factors, which can be displayed as follows:



Therefore, we could identify a relationship between factors (as independent variables) with the purchase decision (dependent variable) based on past literature. This identified relationship will be proved through further study of this research in data analysis.

#### Reference List

- RESEARCH INTELLIGENCE UNIT, (2010), *Demand for Housing in Sri Lanka*, [online] available from: [http://www.riunit.com/news\\_det.php?NewsID=160](http://www.riunit.com/news_det.php?NewsID=160), 2015.
- Research intelligence unit, (2015), *Colombo condos sell out pre-construction*, retrieved from (<http://www.sundaytimes.lk/120122/BusinessTimes/bt24.html>, 2012), [accessed: 5<sup>th</sup> may 2015].
- THE CENTRAL BANK IN ITS ANNUAL REPORT, (2002), *Housing Shortage*, [online] available from: <http://www.apbsrilanka.org/articales/16an/artical-16a-delrene-seneviratne.html>, [accessed: 29th April 2015].
- JLL, (2009), *on point research*.
- CEYLON TODAY, (2012), *Real estate market*, [online] available from: <http://www.ceylontoday.lk/22-5187-news-detail-real-estate-in-sri-lanka.html>, [accessed: 5<sup>th</sup> may 2015].
- INTERNATIONAL REAL ESTATE REVIEW, (2009) Vol.12 No.3: P 273 – 294.
- EKANAYAKA AND WEERAKOON, *Analysis of Locational Suitability for Residential Development in Colombo Sub Urban Area: Application of*

*Analytic Hierarchy Process, Sri Lankan Journal of Real Estate Department of Estate Management and Valuation University of Sri Jayewardenepura.*

Available from:  
[http://shodhganga.inflibnet.ac.in/bitstream/10603/9434/10/10\\_chapter%205.pdf](http://shodhganga.inflibnet.ac.in/bitstream/10603/9434/10/10_chapter%205.pdf), [accessed: 12<sup>th</sup> august 2015].

- PHAN THANH SI, (2012), *Key Factors Affecting House Purchase Decision of Customers in Vietnam.*
- AL-NAHDI, (2015), *Factors Affecting Purchasing Behavior in Real Estate in Saudi Arabia, International Journal of Business and Social Science*, Vol. 6, No. 2.
- PHAN, (2015), *The Housing Bubble And Consumer Buying Behavior.*
- ARIYAWANSA, R.G., (2007), *an empirical study of consumer behavior in housing market in Colombo*, Vol. 08, Issue 01.
- ADAIR ET AL, (2009), *Residential Real Estate Purchase Decisions in Australia.*

## **Office Market: An Overview of Colombo CBD Office Market and a Literature Review of Rent Determine Factors**

**M.M.T.S.Silva<sup>1</sup>**

<sup>1</sup>Undergraduate, Department of Estate Management and Valuation  
[tharakashaveen@gmail.com](mailto:tharakashaveen@gmail.com)

### **1. Introduction**

Individuals and communities need structured and conditioned spaces. The built environment and things contained in it are vital for human's day to day activities and on a global scale real estate makes up more than 60% of the world's equity. Real estate which can be defined as "Property consist of land and the buildings on it, along with its natural resources such as crops, minerals, or water. Investment in real estate is considered as a long term investment compared to other types of investment. The real estate market includes various market segments ranging from business premises like offices, stores and commercial buildings to non-profit real estate like housing corporation properties. Investors may invest in income producing property and non-income producing property.

In this study the real estate for office uses has been focused. Simply we can define office place according to Delik Pekdemir, (2009) in modern terms an office usually refers to the location where white-collar workers are employed. Also Arora (1992) states as the term office is identified with an activity not only a place and it is described as "any place where information on paper is come together and documented, preserved and used for current and future operations of business". Commercial office properties comprise a large portion of the nation's wealth DiPasquale and Wheaton, (1992), provide the working environment that allows many businesses to operate efficiently Clapp, (1993) and make up an important component of the urban landscape Hough and Kratz, (1983). Offices are increasingly the major focus on the economic activities. Office is a place where mass of data is accumulated in a systematic manner and is analyzed for management action and channels of communication within and outside of an organization (R G Ariyawansa, 2010).The transition of factory based or manufacturing economy to service based economy has become the main reason for sudden emergence of "Office" trend within Sri Lanka.

Since the end of the civil war in mid-2009, the country's economy has been on a strong growth trajectory led by determined rebuilding measures, surging tourism and increased investor confidence. Jll (2013). In Sri Lanka, real estate is an emerging industry in which many revolutions appear. Colombo, also known to be the heart of business with no doubt is the internationally recognized landmark in Sri Lanka. As a third world developing country Sri Lanka is necessarily recognized with attached to

Colombo in global context. Over the past decade a significant improvement in the businesses can be observed within Colombo. However, with the dramatically changes in world business sector, many opportunities have been emerged even within the island wide. All most all the giants in the business world in Sri Lanka prefer and already established their head office around Colombo due to its strategic locational value.

Office Market is one such area which has not yet been addressed deeply by the scholars in Sri Lanka. However, office market related studies in the country seem not prominent. The reasons for that may be higher complexities in identifying an exact office market in Sri Lanka, even though most of other countries have well demarcated office markets such as New York Manhattan Office Market, Hong Kong Office Market, and Berlin Office Market etc. This study, therefore, aims to analyze the general pattern of the office market and to discuss the determinants of the rent for office space in Colombo.

Colombo, as the largest commercial city in Sri Lanka has evolved significantly over the last decade. This shift is a result of structural changes took place within the country after the war situation prevailed for almost thirty years. Hence, there is a large pool of growing opportunities that has to be addressed properly to meet the economic growth goals in future. Moreover, there is a tremendous expansion in the service sector. According to the Central Bank report for 2013, highest contribution to the GDP is by the service sector. Service sector has a linear relationship with the new trend of office culture. However, there are number of determinants for the rent of an office premises. Especially when considering a city with a strategic importance. This new trend of office culture and growing opportunities in the business field will ultimately create a blue ocean for the potential investors. Their focus will essentially draw towards the commercial city of country, none other than Colombo. Therefore it is essential to do a proper research to gather and analyse data to serve the information needs of the investors. It is not only important to support the potential investors of the office rent market but also other businesses will also get benefited through the research. Because due to the strategic advantage of the location many business giants would look forward to establish their main office near Colombo. Rent is one of the main cost factors that any company pay attention on. Therefore having done a research on this specific topic not only serve the information needs of investors of office building lease market but overall all the business companies. In this research the principal focus is to determine the factors which determines the office rent in the Colombo CBD area.

Emergent firms and their workers want an experience rich, integrated and ultra-convenient settings in their working environment. All these conflicting and sophisticated needs has to be negotiated with a certain price. Rational buyers will always look forward to get the best deal to lowest possible price. On the other way

suppliers would seek a higher price. How can these contradictory demands and supply expectations could bring to the same page? How can a single price or a rent could be decided to satisfy both the tenant and owner? Through this research a justification has been drawn to these queries.

For all most all the countries, investment on infrastructure is a vital aspect to develop a competition within the economy. In Sri Lanka, sole responsibility on infrastructure development falls on the government. This research will be a source of information to the government decision makers, when allocating the budget in infrastructure development projects. Specially, when taking decisions on town planning, relevant authorities should pay their attention on both residential and office building markets. Because any wrong decision might affect to the entire economy ultimately causing an imbalance in the economy. This research will provide a firm basis for the future studies related to the office market condition prevailed in Sri Lanka and rent determinants. Finally, future is calling for more abundant connected and active working environment where home and working place are less delineated, transportation is much swift and inter connected. If such an environment is cultivated, the pace of economic growth will rise up to a level, enabling to compete with the global level office market players. To achieve such a vision, I consider this research to be the initial step.

### **What is mean by an Office?**

The place “office” can be identified as an important part of an organization. Successful administration of an organization mostly depends on its office. Simply we can define office place according to Delik Pekdemir, (2009) in modern terms an office usually refers to the location where white-collar workers are employed. Whether it is a government department, or a business enterprise or any form of organization, office is a vital component for its functions.

It is very difficult to define the term “office” due to its broadness of application. It has been defined in a variety of ways. Generally, an office can be identified as a place where clerical operations of an organization are carried out. It is not too simple as Arora (1992) argues as the term office is identified with an activity not only a place and it is described as “any place where information on paper is come together and documented, preserved and used for current and future operations of business” From firms’ point of view, a modern office is a very important and sophisticated administrative center. Its work is essential to an enterprise’s operations. It contributes significantly to the attainment of goals and to the progress of the enterprise (Terry, 1980).

### **Office market an over view**

“Real estate cannot be lost or stolen, nor can be carried away. Purchased with common sense, paid in full and managed with reasonable care, it is about the safest

investment in the world” (Franklin D Roosevelt). Real estate is a well-established market over the global context. Moreover, with the increasing interest on the urbanization, the importance for the real market has also increased. Commercial property has an important role in the real state.

Demand in an office market depends on the office occupying industries. That is when the office occupying industries shows a growth, automatically the demand for office can also grow. In a perfect market situation, this kind of a relationship can be expected. But practically such a scenario cannot be expected always. For instance, in 2000 the vacancy rate of the Amsterdam office market were below 3%. But soon after turning of the millennium, office market dropped drastically after huge layoffs at the office occupying companies increasing the vacancy rate up to 20%. Accordingly, in a turbulent business environment one cannot depend on the fact the office market always depends on the office occupying industries. On the other hand as the useful life of buildings is usually high, if kept unoccupied for a period, that would be a huge loss to the office investors.

Most of the researches on the office market has based in the US market. One of the reasons for such a focus is due to the size of the US office market. The combinations of the large cities and mass service sector employment causes numerous substantial office markets within the country. And also due to the convenient access to data is also another possible justification for such selection. However, be it Europe or Asia with the growth of the office market data collection methods and reliability of the collected data is being excavated.

As an overall view on the office market, the trends shows a positive aspect on market which implies more investment attentions shall be paid towards this field and this emerging interest has encouraged most of the private sector to share their information on the office market and rent determinants.

### **Importance of office market in Sri Lanka**

With the fast growing interests on the urban affairs, real estate has become one of the most important field of studies. When considering this in the Sri Lankan context, still the depth and the number of the studies performed to identify the key aspects of the office market is inadequate. Since the end of the civil war in the mid 2009 the country’s economy has been on a strong growth. With this kind of an environment investors who are looking to capitalize their investment in economic growth has increased the demand and the prices of the office markets.

Addition to that, according to Central Bank reports the gradual development in the service sector areas such as finance, IT, tourism industry in Colombo has triggered a healthy demand for office space in the Colombo.



Gross Domestic Profit of the country is highly contributed by the service sector. And also Galle Face area of Colombo 2 has been ear-marked as a further tourist development area, recently defined by a deal with the international Shangri-La Group, purchasing a six acre block of state owned land in 'Galle Face' for \$125 million for a 500 room hotel, shopping and residential apartment complex. As a result of government policies paired with the current political and economic outlook of Sri Lanka, the future real estate market in the inner City of Colombo is likely to drastically transform towards an exclusively high end market.

According to a research done by the Asian Development bank considering Sri Lanka, Bangladesh and India, about the highest competitive cities Colombo has been ranked as number one. Further it has identified the most favorable sectors in the competitive rankings of sector industries were textile and apparel, finance, insurance, hotels and restaurants.

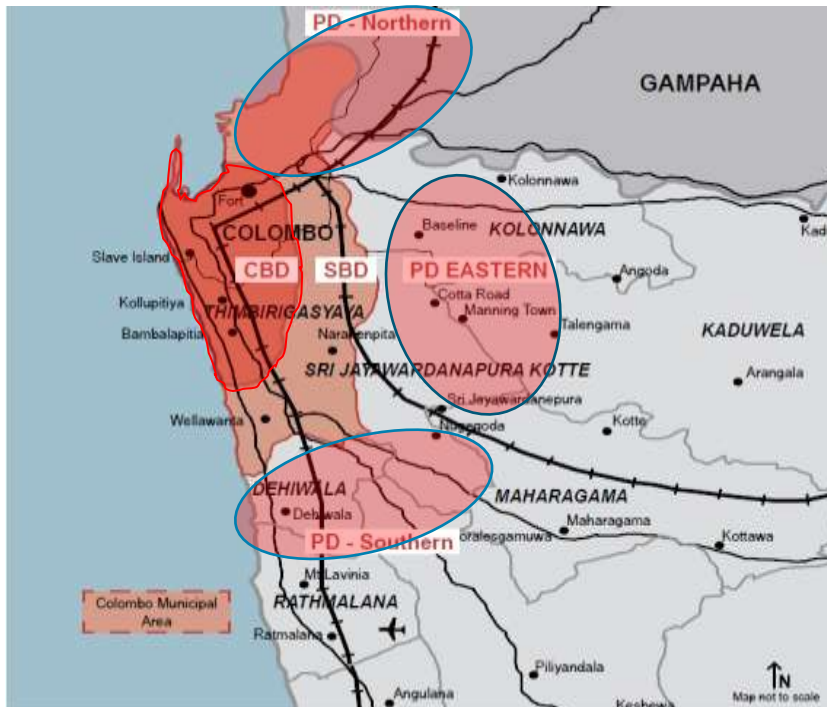
With reference to the Economic and Social Statistics report produced by Central Bank of Sri Lanka (2013) the number of Bank and financial institutions in the western province numbered to 1057 out of which 632 branches were located within Colombo metropolitan region. A majority of office space occupied by this sector is in self-owned or single tenanted office properties across all major locations in the city.

Another upcoming trend witnessed within Sri Lankan service sector is Information Technology and Information Technology Enabled Services (IT/ITES). Many global giants like Microsoft, Motorola, Amba research, Virtusa and Aviva has already established their off show centres in the country. According to SLASSCOM, over 40,000 people are employed in the IT and BPO industry in Colombo and the workforce is growing at over 20% annually with low attrition rates of 10-15%. Despite of all the already captured market, Colombo has both the potential and opportunity to extend its office space supply much more.

### **Colombo office market**

The area covered under the research is Colombo city. For the purpose of administration Colombo has been divided in to 15 zones. Out of these zones, Colombo is listed under the Central Business District (CBD), Secondary Business District (SBD), and Peripheral Business District (PBD). (Jil 2013). Being the commercial center of the country Colombo plays a vital role in the entire economy. Colombo area covered 42.22 Sq.km and 6.9 million of population. Per capital income in Colombo can be estimate as 2335.66 \$.

## Segmentation of Colombo office Market



Prepared by author

It is understood, due to main two reasons the value of the properties in Colombo has risen. Increasing migrations towards the Colombo and the desire to own property within Colombo area with the enormous infrastructure projects that takes place are those above stated main reasons. Colombo already is the headquarters for number of service sector companies. During the last few years, service sector has achieved a significant improvement, resulting the highest contribution to the GDP of the country.

### Infrastructure facilities

Infrastructure facilities of Colombo city limits are well established and well maintain and new infrastructure facilities are under construction and expansions of existing once are ongoing.

### Colombo port

Now with the expansion of the Colombo South Harbor project CICT (Colombo International Container Terminal) was established and 12 Quay Cranes were added. Additional facilities include the Bandaranaike Quay (BQ) and Prince Vijaya Quay (PVQ) with four rail mounted quay cranes, and 6,245 m<sup>2</sup> (67,221 sq ft) of bonded warehouses.

***Bus route network***

Colombo has an extensive public transport system based on buses. Bus service is operated both by private companies and the government owned Sri Lanka Transport Board (SLTB). Central Bus Stand functions as the primary hub for bus transport. Road network in Colombo consists of radial links (or arterial routes), which link the city center and district centers, and orbital links, which intersect the arterial routes. Most bus routes run along the radial links without the benefit of dedicated bus lanes owing to the high volume of traffic at peak times.

***Train network***

Commuter rail services connect Colombo to its suburbs, helping alleviate rush hour congestion on city roads. The commuter trains use the same track as the intercity services, but only run locally. Electrification of the commuter rail network has been proposed, to improve energy efficiency and sustainability. Colombo's commuter rail network consists of 100 kilometers of track from Panadura to Polgahawela, running via Fort Station and Maradana Station. The route is multiple tracked to handle the intensive service during peak times.

***Communication***

Connected to the South East Asia-Middle East-West Europe 4 (SEA-ME-WE IV) project, the submarine cable system linking South East Asia to Europe via the Indian Sub-Continent and Middle East. SEA-ME-WE 4 fiber optics cables provide a bandwidth capacity of 1.28 terabits per second, with a 25 year guaranteed lifespan for the technology. Free Wi-Fi hotspots available in common spaces like Colombo Central Railway Station, Majestic City, Floating Market in Pettah, Colombo Law College, Colombo Public Library, Colombo Museum, Galle Face Colombo, Colombo Racecourse, Colombo Police Head Quarters, Fort Dutch Hospital and etc. Coverage of Third Generation (3G), Fourth Generation (4G) and fixed line internet services by mobile and fixed line operators.

***Electricity and Water***

Colombo water consumption demand can be estimate as 3m<sup>3</sup> per second. Most of entities receive water facilities by government pome system centering Ambathale station. Distribution of electricity in Colombo city fulfill by 8 primary substation located in the city. Annual electricity consumption can be estimate as 1000 million volts. There is an underground electrical cable system in Colombo city limits.

***“Grade A” Office Spaces***

According to RICS “Grade A” offices means  
Modern facility with high quality finishes;  
flexible layout; large floor plates;  
Spacious lobbies and circulation areas;  
Effective central air-conditioning;

<b>Indicator</b>	<b>Variables</b>
Location	<ul style="list-style-type: none"> <li>• Appropriate site access and parking space availability</li> <li>• Availability of alternative transportation options</li> <li>• Adequate public transportation infrastructure</li> <li>• Proximity to leisure facilities</li> <li>• Meeting emission standards for heat and light pollution</li> </ul>
Efficient architecture	<ul style="list-style-type: none"> <li>• Project aesthetics</li> <li>• Availability of efficient and flexible plans</li> <li>• Ceiling height</li> <li>• Plan size</li> </ul>
Building materials and finishes:	<ul style="list-style-type: none"> <li>• High quality</li> <li>• Reduced pollution emissions</li> <li>• Eco-friendly materials</li> </ul>
Work Environment	<ul style="list-style-type: none"> <li>• Ability to enhance the well-being and productivity of employees</li> <li>• Indoor air quality</li> <li>• Good exposure and natural light</li> <li>• Thermal comfort</li> <li>• Sound-proofing</li> <li>• Proximity of leisure facilities</li> </ul>
Efficiency systems	<ul style="list-style-type: none"> <li>• Reduced energy consumption</li> <li>• Renewable energy sources</li> <li>• Advanced testing and maintenance systems</li> <li>• Managed cooling systems</li> <li>• Continuous performance measurements</li> <li>• Flexible interior infrastructure</li> </ul>
Professional Services	<ul style="list-style-type: none"> <li>• Housekeeping/custodial services</li> <li>• Management and recycling of solid refuse during construction and throughout the building's life cycle</li> <li>• Security</li> </ul>

Good lift services zoned for passengers and goods deliveries;

Good management and parking facilities are normally available.

**Building Owners and Managers Association International** define “Grade A” office space as most prestigious buildings competing for premier office users with rents above average for the area. Buildings have high quality standard finishes, state of the art systems, exceptional accessibility and a definite market presence.

Parameters of **HINES investments and developers** grading “Grade A” building can be categorized as following

#### **Prepared by Author**

##### **“Grade A” Office Spaces in Colombo CBD**

There are only four “Grade A” buildings that can be identified in Colombo city according to the above-mentioned parameters. Most of the buildings in Colombo city fall under Grade B or Grade C. “Grade A” buildings are

World Trade Center

Iceland Business Center

HNB Tower

Parkland Tower

#### **Colombo CBD Office Market**

CBD of Colombo includes Colombo 1, Colombo 2 and Colombo 3. It can be considered as the central hub of business, retail, financial, transportation, and governing hub of Sri Lanka. Many head offices of government and private organizations are located in the CBD area. Colombo 3 can be considered as an emerging business area in Colombo CBD and also Nawam Mawatha Business Center is one of the iconic business hubs in Colombo. Iconic Sri Lankan buildings like WTC, Galle Face Hotel, Dutch Hospital and etc..... are located at the CBD. High-end customers based at CBD and many people are commuters who travel daily to CBD. Around 600,000 people migrate to CBD for their needs. But there is a ribbon development, urban sprawl and informal sector activities in Colombo 1 area and Colombo 03 and 02 reflect a modern office trend.

CBD of Colombo is the financial, business and transportation hub of Sri Lanka. Part of the CBD is upscale and modern, especially those parts close to the Galle Face beach where the Galadari, Intercontinental and Hilton Hotels, as well as the World Trade Centre are located. Other parts closer to the Pettah market cater to the mid-income segment and form the traditional CBD core of Colombo preferred by HNIs, businessmen, senior executives of corporate houses; upper and upper middle-income earners, except for the Pettah area. High-end premium residential projects in the price range of INR 20-30 million. Capital values appreciated by more than 40% in the last three years but with limited land availability.

**Details of Grade A Office Building in Colombo CBD**

Building	Type	Total Sq.ft	Floors	Rent Sq.ft.per month (LKR)	Major Tenents
World Trade Center	Retail/Office	700,000	B+G+37 Each Tower	315	CSE, Asia Broadcast Cooperation, R R Donnelley, BOI Sri Lanka, Sri Lankan Ari line
HNB Towers	Office	300,000	B+G+23	255	HNB, Dialog, WNS, Mass,
Parkland Tower	Retail/Office	195,600	G+19+RT	285	Vacant
Iceland Business Center	Office	66,220	G+M+7	210 (1-6 floors) 235 (G, M and 7th floor)	Vacant

Prepared by Author

**General Market Practices in Colombo CBD Office Market**

Prepared by Author

**Rent Comparison of Colombo City Sub Markets**

Sub Market	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32
CBD																
SBD																
PD North																
PD East																
PD South																
	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320
<b>Average rent per Sq.ft per month (LKR)</b>																

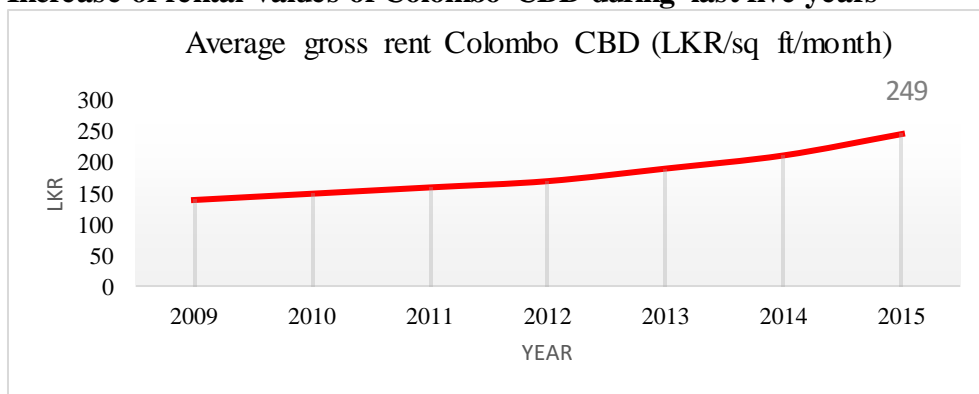
Prepared by Author, Source: JLL Research, 2014

According to the above table CBD has the highest rental and PD North has the minimum rental value capacity. By looking at the above graph we can see CBD market has large rental gap (180 – 320). PD North sub market which representing the Rajagiriya, Batharamulla area come close to SBD market.

SBD market also has high range of rental value but it not vary as CBD because SBD represent similar type of buildings but CBD content include different type of buildings with different type of conditions.

SBD and PD North market rentals are in an equal range but PD North market has high rental variation because of demand of customers and condition of the buildings.

**Increase of rental values of Colombo CBD during last five years**



*Prepared by Author, Source: JLL Research, 2014*

**Asia pacific office market**

With China and Japan expanding their economy, the entire Asia pacific office market has been affected. But as an overall the region has shown a slow growth in the office market. That is event though there is an independent growth in countries like Japan and China these positive performances were not enough to sustain regional growth, and consequently, many occupiers were notably cautious over the majority of the year.

If the country wise growth in the office market is considered Hong Kong is the second most expensive market globally and was also the most expensive location in Asia Pacific, followed by

Beijing and Tokyo in second and third for the region, respectively. Occupier demand levels were muted in Hong Kong, with activity from larger occupiers in particular easing noticeably over the year. However, going forward, Hong Kong’s position as one of the most important global financial centres is anticipated to help buoy demand levels into 2014. Prime rents in Hong Kong are expected to remain largely stable with relatively few completions anticipated.

Rental performance across India has been mixed, with the major markets remaining stable whilst others witnessed minor corrections. New Delhi’s CBD (Connaught Place) has remained the most expensive location across the country in 2013 due to its strong rental levels holding firm. With the domestic economy regaining some momentum towards the end of the year, occupier demand moved up significantly in the final quarter of the year, helping to push prime rents upwards in select cities that have low vacancies.

Rental growth was largely flat across Asia Pacific over the year, with an overall regional rental rise of just 2% in 2013. Economic conditions were more fragile in the first half of the year, although growth in core markets of China and Japan advanced as the year progressed. However, the region is well represented in terms of the most expensive office locations on a global scale. Hong Kong retained its position in second place overall, Beijing came in fourth position and Tokyo in fifth. Asia Pacific’s performance in 2014 is anticipated to be similar to that seen in 2013, with slow and stable demand anticipated to keep rental levels largely unchanged, albeit with incentives becoming more competitive.

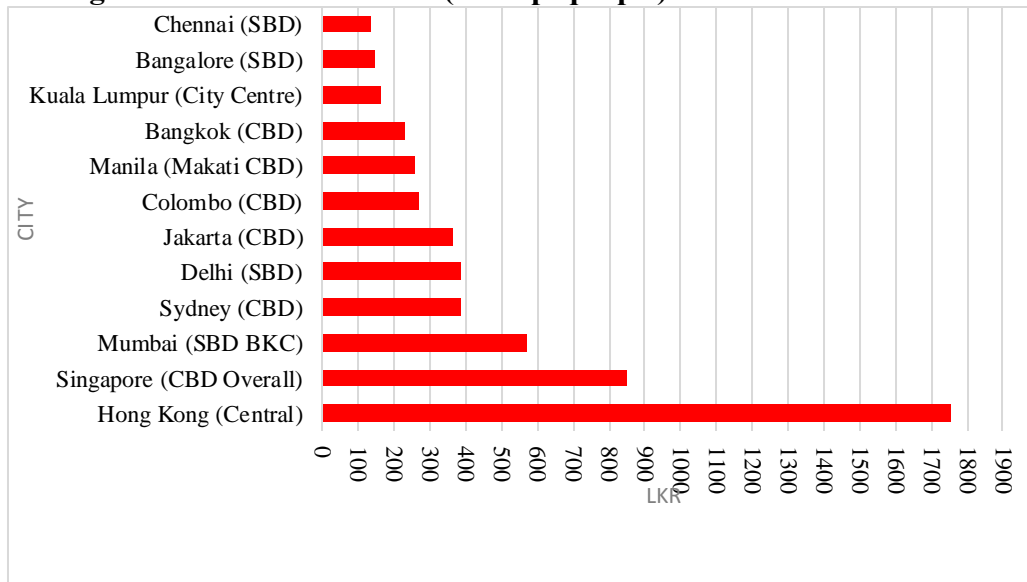
**Average “Grade A” office Rent of Asia pacific cities 2015 (LKR psq.ft pm)**

	<b>2015 Average Grade A Rent (USD psq.ft pa)</b>	<b>2015 Average Grade A Rent (USD psq.ft pm)</b>	<b>2015 Average Grade A Rent (LKR psq.ft pa)</b>	<b>2015 Average Grade A Rent (LKR psq.ft pm)</b>
<b>Hong Kong (Central)</b>	149.72	12.48	21051	1754
<b>Singapore (CBD Overall)</b>	72.30	6.03	10166	847
<b>Mumbai (SBD BKC)</b>	48.61	4.05	6834	569
<b>Sydney (CBD)</b>	32.81	2.73	4613	384
<b>Delhi (SBD)</b>	32.81	2.73	4613	384
<b>Jakarta (CBD)</b>	30.95	2.58	4351	363
<b>Colombo (CBD)</b>	22.72	1.89	3195	266
<b>Manila (Makati CBD)</b>	22.12	1.84	3110	259
<b>Bangkok (CBD)</b>	19.80	1.65	2783	232
<b>Kuala Lumpur (City Centre)</b>	13.94	1.16	1960	163
<b>Bangalore (SBD)</b>	12.27	1.02	1725	144
<b>Chennai (SBD)</b>	11.71	0.98	1646	137



Prepared by Author, Source: JLL Research, 2014

**Average “Grade A” office Rent (LKR psq.ft pm) 2015**



Prepared by Author, Source: JLL Research, 2014

**Office market rent determinants**

The following section gives an overview of the most important rent determinants identified in previous empirical studies. Most of these studies apply a model to test the relative importance and order of these factors.

Because of heterogeneity of the market each property owns specific characteristics or qualities such as location and physical characteristics etc.... of the property. The rent of each property varies widely and systematically with these characteristics. Rent has been defined as a “definite periodic return, in terms of money or other provisions, for the use of property” (Ring, 1972: 161). By considering this statement, it can be say that rental price of the property is important as it shows the amount of rental payment that must be paid by tenants and the amount of rental income that will be received by landlords. As Eda ustaoğlu (2003) mentioned “Rental price is primarily determined in the market due to the supply and demand relationship.”

Research on office rent determinants has been the subject of a wide range of specialist fields, ranging from econometrics to urban studies and from architecture to civil engineering. (Oven V. A. and Pekdemir D.). Considering past studies done under different geographical locations and socio-economic conditions proved that both demand and supply factors effect to determine the rent of office uses.

Eda ustaoğlu (2003) argued those factors can be categorized into three sections. Property's ability to command rents is basically related to its physical and locational characteristics. Different from these two characteristics, there is another characteristic attributed to a leasehold property. It is the transfer (lease) characteristics. These three characteristics attributed to a rental property provide a base for the analyses of the rental value.

Physical characteristics relate to natural grants and man-made structures like  
Size

Functional efficiency

Vertical location and internal accessibility

Construction components and internal services

Physical structure of the building

Physical Depreciation

In his study locational advantages are of great importance in determining the values of both urban land and built structure. As he mentioned locational attributes will be examined under three specifications

Neighborhood influences,

Site access and transportation patterns

Linkages.

In transfer (lease) characteristics variables it represents characteristics and terms of a lease.

Oven V. A. and Pekdemir D. in their study office rent determinant factors have been identified as

Econometric

Building,

Location,

Contract

As they argued Econometric determinants are based on supply and demand variables: various demand side determinants have been used including the vacancy rate, GDP the service sector employment the unemployment rate the interest rate the absorption rate The only supply side determinant used in these studies was the office stock which reported to have either no or negligible influence on office rent Furthermore, not all demand side determinants have been found influential. Indeed, only the vacancy rate GDP and the interest rate are reported to be significant influences. Hence it may be concluded that econometric parameters cannot be excluded from any realistic office rent model and that, although the relative value of these determinants may change, their influence on office rent is largely unaffected by any regional difference.

In feather they explain it has also been recognized that office property is a heterogeneous good which has strong attributes relating to physical characteristics of

the building and locational influences. In addition, the terms specified in the contract can influence the rental value and they also have to be considered as potential influential determinants.

Researchers like Clapp [1980], Brennan, et. al. [1984], Frew and Jud [1988] and Wheaton [1984] proved that building characteristics, such as

Building age

Rentable floor area,

Number of stories

Area allocated to common use

Number of amenities offered in the office building – (bank, conference room, shop, restaurant, day-care, health club and parking area can influence to determining rent in office uses.)

Wei chin (henry) (2003) in his study mentioned some researchers like (Gardiner et al. 1988, Dobson et al. 1992, Giussani et al. 1993a, Giussani et al. 1993b, D.Arcy et al. 1994, McGough et al. 1994, Hendershott et al. 1996 Keogh et al. 1998, Tsolocas et al. 1998, D.Arcy et al. 1998) have been focused of macro-economic factors when determining the office use rent in market. Some of those factors are GDP

GNP

Employment Rate or, Unemployment rate(Total/Service)Sectors)

Interest rates (long term or short term)

Inflation

Economic Uncertainty

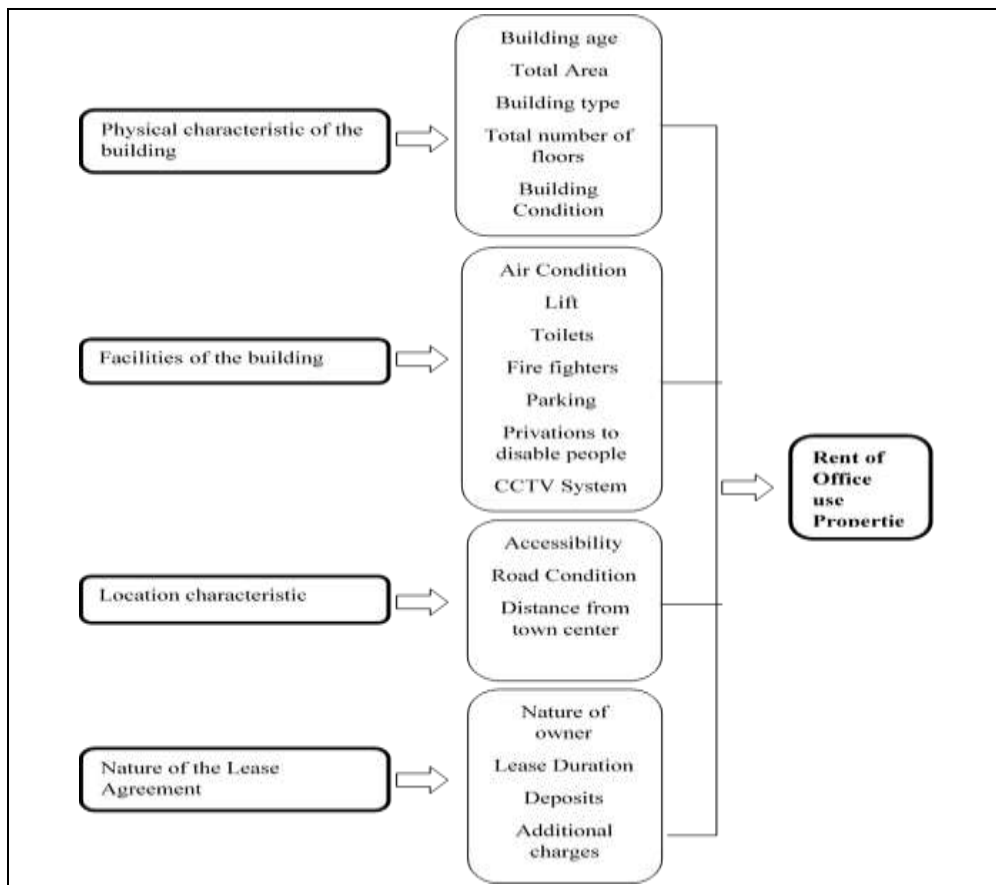
Income

Population

Tsolacos et al. (1998) found that the demand factors (GDP, interest rates and unemployment rate) has a significant influence on the establishment of the rental rates for office buildings. Oven and Pakde et al (2006) also found that interest rate is one of the important factors in determining rental rates of office in market. A study conducted by D'Arch et al. (1999) found the relationship between GDP with rental rates, where the change in GDP is one of the most dominant factor to affect the rental rates. For labor in Germany, Voigtlander (2011) found that office worker is the best predictor to determine the average of rental rates in comparison with the overall level of employment and unemployment. Not only the rental rate, the macroeconomic variables also could affect the selling price of office buildings. Singh and Komal (2009) in their study in India found that the GDP, inflation and interest rates could affect the selling price of real estate in India.

A conceptual framework can be developed based on the literature of past studies and market survey for Colombo CBD. The conceptual framework developed for office rent determinants which diagrammatically explains the relationship between independent and dependent variables which can be used as an indicator. According

to the conceptual framework illustrate importance of identification of determinant factors related to office uses.



Prepared by Author

### Reference List

- Ariyawansa R G (2007), “An Empirical Study of Consumer Behavior in the Housing Market in Colombo”, Built-Environment-Sri Lanka, Vol.08, No.01, pp. 11-19
- Ariyawansa R G (2008), “Property Market in Colombo”, Published by the author, Colombo
- Brennan, T. P., Cannaday, R. E., Colwell, P. F. (1984), “Office Rent in the Chicago CBD”, Journal of the American Real Estate and Urban Economics Association, Vol.12, No.3, p: 243-260.
- Clapp, J. M. (1980), “The Intra metropolitan Location of Office Activities”, Journal of Regional Science, Vol.20, No.3, p: 387-399.
- D'Arcy E., McGough T. and Tsolocos S. (1994), Modelling the Determinants of Office Rental Values in Major European Cities , Discussion papers in

- Urban and Regional Economics, Series C, Vol. VII, No. 99, Department of Economics, The University of Reading, Reading.
- Dodankotuwa J B (2000), “Recent Trends in Real Estate Market”, in [www.lankaproperty.net/news.htm](http://www.lankaproperty.net/news.htm).
  - Duffy F (1997), “The New Office”, Conran Octopus Limited, London
  - Edirisinghe P (2004), “Colombo - Then and Now”, Sunday Observer, February 14th 2004 in [www.sundayobserver.lk/2004/02/15/fea15.html](http://www.sundayobserver.lk/2004/02/15/fea15.html)
  - Fisher, J. D., Robert, M. S. (1994), *Income Property Valuation*, Dearborn Financial Publishing, Inc., USA.
  - Frew, J., Jud, G. D. (1988), “The Vacancy Rate and Rent Levels in the Commercial Office Market”, *The Journal of Real Estate Research*, Vol.3, No.1, p: 1-8.
  - Giussani B., Hsia M., Tsolocas S. (1993a), ‘A Comparative Analysis of the Major Determinants of Office Rental values in Europe’, *Journal of Property Valuation and Investment*, 11, pp 157-173.
  - Hough, D. E., Kratz, C. G. (1983), “Can “Good” Architecture Meet the Market Test?”, *Journal of Urban Economics*, Vol.14, p: 40-54.
  - McGough T. and Tsolocas S (1994), ‘Forecasting Office Rental Values Using Vector Auto-regressive Models’, *The Cutting Edge 1994, Proceedings of the Cutting Edge Property Research of RICS, The Royal Institute of Chartered Surveyors, London*, pp. 303-319.
  - Shing, V., & Komal. (2009). *Prospects and Problems of Real Estate in India*. *International Research Journal of Finance and Economics*, 24.
  - Tsolocas S. (1998), *Lecture Notes: International Real Estate Markets*, The University of Reading, Reading.
  - Voigtlander, M. (2011). *The Link between the Office Market and Labor Market in Germany*. Germany, Cologne: Institut der deutschen Wirtschaft Kohn.
  - Webb, R. B., Fisher, J.D. (1996), “Development of an Effective (Lease) Index for the Chicago CBD”, *Journal of Urban Economics*, Vol.39, p: 1-19.
  - Wei chin (Henry) (2003), “Macro-economic Factors Affecting Office Rental Values in Southeast Asian Cities: The case of Singapore, Hong Kong, Taipei, Kuala Lumpur and Bangkok”. Paper Presented at 2003 PRRES Conference, Brisbane, Australia.

## **Human Settlement Strategy of Mahaweli Development Project**

**U.G.P.C Abeywickrama<sup>1</sup>**

<sup>1</sup>Undergraduate, Department of Estate Management and Valuation

[pubuduflash@gmail.com](mailto:pubuduflash@gmail.com)

### **1. Introduction**

#### **The Mahaweli Development Programme**

The Mahaweli Programme is the most extensive physical and human resource development programme benign implemented in Sri Lanka. What this programme has contributed and is still contributing towards the birth of new settlements, development of energy production and alleviation of unemployment is by no means small. Apart from these control of flood water, modernization of agriculture, development of livestock resources and the ignition of industries based on agricultural products are some of the other important activities of this programme.

#### **The Master Plan of the Mahaweli Programme**

From the latter half of the 1950 decade, the U.N.D.P and the F.A.O carried on research to launch a multi-purpose development programme based on the Mahaweli and its adjacent rivers. The report based on this research was released in 1968. It was proposed by this report, to bring under cultivation 265000 hectares of new land to provide irrigation water for 100000 hectares to generate 2037 million kilowatts hours or hydroelectricity annually. The report showed that it was more suitable to put this plan in to action in stages and it was phased out over a period of 30 years. (MASL-website)

#### **Implementation**

The first project under the master plan was polgolla and bowatenna. This was inaugurated in 1970 and completed in 1976. This project was able to provide irrigation water to 53500 hectares of land already under cultivation and to 2400 hectares of new lands, and also to provide hydro-power of a capacity of 40 megawatts. Also under this same project 2400 farmer families were settled by 1977 in the mahaweli system 'H' belonging to the Kala Oya Valley. 1977 all settlements in system 'H' under this 31631 families settled. The government of 1977 decided to start work on a number on a number of selected projects of the Mahaweli Plan simultaneously and complete them within a short period of five years. A new ministry was established to implement this plan. Under this plan, it was possible to start work on Kotmale, Victoria, Randenigala, Maduru Oya and the right bank canal projects. Later Rantembe project was also included in this. Hydro power is produced on all reservoirs except Maduru Oya, and the same water is used for irrigation purpose. Accordingly Mahaweli system 'C' and 'B' were developed and the settlement of farmer families in them was also include in the accelerated Mahaweli

programme. At 1994 the number of families settled in the Mahaweli areas, including Uda Walawe is 134017.

### **Mahaweli Constructions and settlement**

Reservoirs belonging to the Upper Mahaweli project such as Kotmale, Victoria, Randenigala, Rantembe, Maduru Oya as well as transbasin diversions of Polgolla, Bowatenna, Minipe, South bank streams, Ratkinde, Maduru Oya tunnels, the canal ways of H, B, C and Uda Welawe system the towns built in these areas and in the Upper Mahaweli regions, the schools, post offices, hospitals and other service centers belonging to these towns are among the Mahaweli construction works.

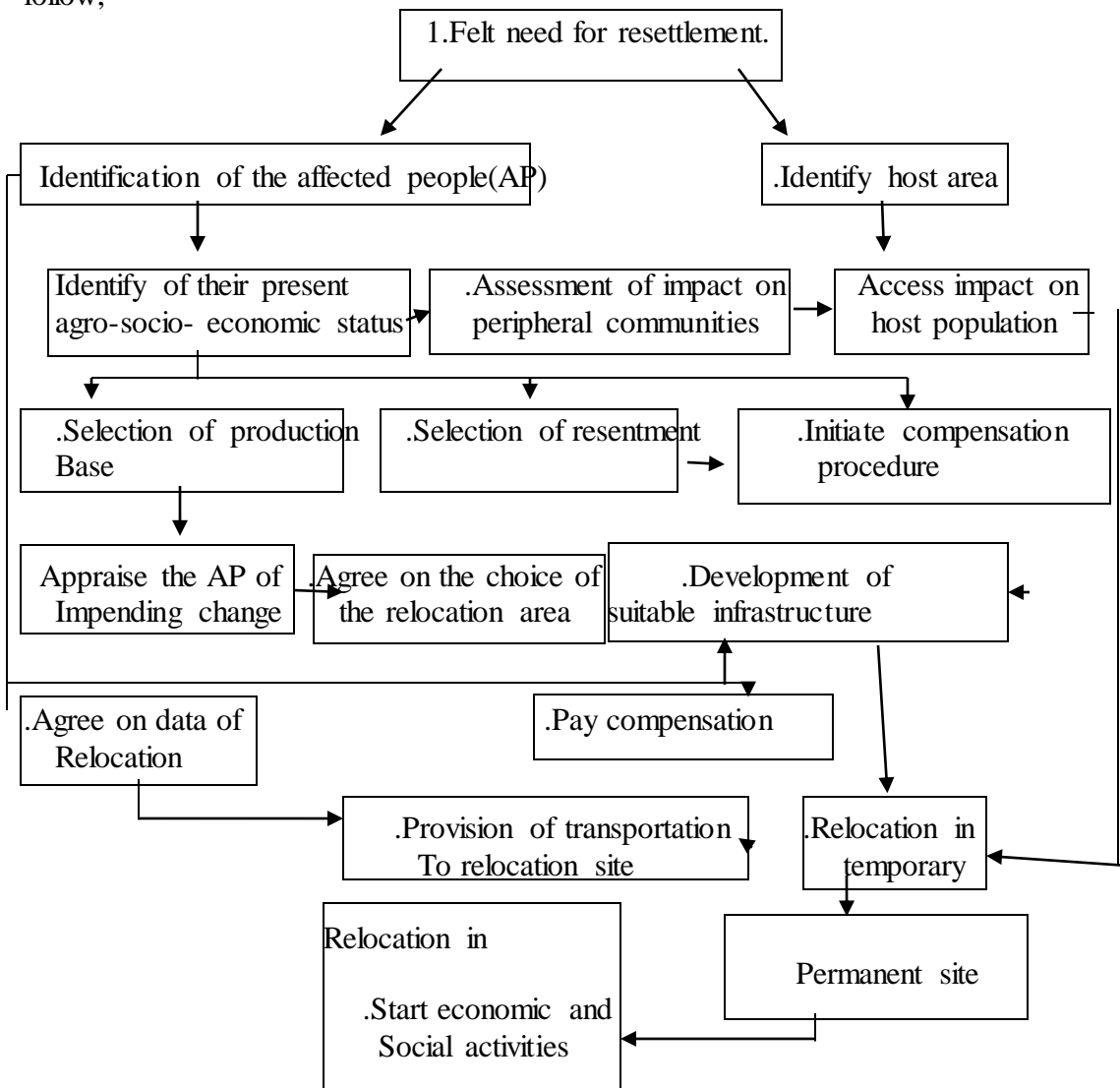
## **2. Mahaweli Resettlement Programme**

### **Resettlement Mean**

Resettlement is a process of moving people to a different place to live as they are no longer allowed to stay in the area where they used to live. When implementing development projects, project implementing agencies have to remove some people from their living places. Because that people live in lands which are needed for the project and also they are highly valued lands in the development area. One development issue that is particularly problematic for the humanitarian world is widely termed 'development-induced displacement and resettlement, referring to the loss of assets and forced uprooting of communities who find themselves in the way of public work-type development projects and who, as a result of their economic dislocation, uprooting and resettlement, find themselves poorer and more marginalize (Cernea, 1996, 1999; Cernea and McDowell, 2000 as cited in McDowell and Morrell, 2007).

**The Resettlement Process in Mahaweli Project**

The processes of settlement consist of two parallel streams of activity as shown in follow;



**Source- The Planning and Monitoring Unit of Mahaweli Authority Sri Lanka**

Under the Mahaweli Master Plan, each farmer family is entitled to 1.2 hectares (3 acres) of land. This is composed of 1 hectare of irrigated land and 0.2 of home-garden land. The settlement programme was started in 1976 to settle farmer families in 13 systems giving each family a hectare of irrigated land. The Mahaweli Authority is the most experienced organization in Sri Lanka dealing with



compulsory and voluntary settlement of large populations. A total of 115000 families have been altogether settled in systems H, C, B, G, L and UdaWalawe. Affected people of Victoria and Kotmale project have been effectively relocated in large settlement scheme in system C and Post experience has created a high level of conceptual clarity of the many issues related to relocation and Mahaweli Authority has taken affective measures to overcome them. It has developed and organization structure to deal with settlement.

### **Preferred Areas for Resettlement**

Interviews conducted during the study reveal that the area preferred by most of the residents is in the vicinity of their location. Particularly the land less and those with small parcels would not mind setting anywhere if cultivatable land is provided.

### **Criteria for Selecting Resettlement Sites**

Mahaweli Authority Sri Lanka uses the under mentioned criteria in selection suitable re settlement sites.

#### **Adequacy of Land**

The site should have sufficient land to accommodate the agricultural and social infrastructural requirement of the resettle population. Since Mahaweli Authority Sri Lanka settle people in units of 200-250 families, site must be able to support at least one units, to ensure the efficient use of infrastructure.

Land should also be available forest reserves. There should be provision for village wood lots and grazing and additional land for future development of the communities.

The land should be free of encumbrances free from encroachments or multiple claims.

Since paddy cultivation will be the main crop, water should be available for two-season cultivation.

Potable water should be available for domestic use.

The Mahaweli Authority strategy of the resettlement families consists of:

Land acquisition and compensation

Relocation

Provision of facilities in the resettlement areas.

All new building will be above the full supply level but within the 100m reservation. Whether they should be relocation or permitted to continue in their present locations with suitable migratory measures being taken will depend on the following considerations.

Need extent for which the services will be required.

Accessibility to these centers.

Pollution of reservoir.

## **Land Acquisition and Compensation for Settlement**

### **Land Acquisition**

Private and Swarnabhomi lands that would be lost due to project activities will be acquired. Land acquisition is legal procedures laid down under the Land Acquisition act, amended by Act No.60 of 1961, Act No.5 of 1964, Act No.28 of 1964 and Act No.8 of 1979 of the Government.

The process of actuation takes the following form.

The Acquiring officer of the district under the directions of the Minister of lands, publishes a notice under section 2 indicating the intention to investigate the suitability of the identified land for public purposes. Compensation is paid under section 3 for any damages caused during the investigation. If it is found that the land is suitable, notice is given to the owner(s) under section 3(3).

An issue of declaration under section 4(5) (1) is considered evidence that it is needed for public purposes. When a declaration under section (5) is gazette, plan(s) can be prepared by the survey department.

The state takes possession of the required land by an order of the Ministry of Lands, published in the newspapers or when urgency demands, by gazette notification under section 38 of the Act. This compels the people in occupation of the land or buildings to leaves the premises. The Acquiring officer is then in a position to take over the land.

### **Compensation**

Under this procedure, compensation for land and building including cultivation will be paid to the evacuees after completing inquiries under section 9 and issue of awards made under section 17 of the Act. Before the families are evacuated, the value of the land, houses and cultivation should be assessed by the Valuation Department and payments made accordingly.

Compensation for paddy land involves a somewhat more complicated procedure before issue of awards under section 17. The process of awarding compensation take the following form.

Survey of parcels of land will be carried out by the survey department, permanent plans prepared and submitted to the government agent.

On receipt of the survey plans, a notice will be published in the newspapers and government gazette calling for written claims under section 7. All claimants are requested to attend inquires into the title of the land under section 9.

When there is no dispute action will be taken under section 10/1 A. When the title is disputed the Courts are notified and legal procedures instituted under section 10/1B.

After successful completion of inquiries, the claims and inquiry notes are forwarded to the valuation department.

The valuation department investigates local land sales and land registry entries before assessment and preparation of valuation reports.

On receipt of the valuation reports the government agent is empowered to issue awards under section 17.

If the parties are satisfied with the compensation, offered payments can be made forthwith.

If they are not satisfied, they can appeal to the land acquisition board of review for arbitration. The decision of the board has to be awaited to pay compensation.

The prevailing local land tenure system permits the fragmentation of land to any extent. This has resulted in a multiplicity of claimants owning undivided shares. Concomitant with it, is the absence at times of legally valid documents in support of the claims on barely tenable ground through ignorance or avarice.

The entire procedure, which involves a number of government departments, is time consuming and causes considerable delays in settling claims. This is quite disadvantageous to the resettlers, even though interest is paid for the delayed period, because they have no other capital so needed desperately to recommence their life in the new area.

### **Compensation for Land**

Compensation will be determined on the following basis. Private land will be fully compensated through each settlement. Nindagam land will be treated in the same manner. As for permit holders, they are not entitled to receive a cash payment for their land. They will be granted payment in consideration of the development work carried out on their plots. This category will include the LDO permit holders and the regularized encroachers.

Encroachers who have been living on the land before the cut off data will also receive payment for the development of such lands and alternative lands plus other assistance that will be provided for the other settlers under the settlement schemes.

Swarna Bhoomi deeds are issued at a land kachcheri to residents who have occupied the land for a long time. They have the right to sell the land. As such, title holders will be eligible to receive full compensation for the land.

Annual or temporary permit holders will not receive any payment for the land, because they lose claims to the land at the end of the period for which the permit is issued. All such residents who have developed their lands will receive a payment for their development work, based on a government valuation.

**Compensation Options**

Compensation is offered to persons who lose their cultivation as well as their land. Any building resting on the land too will be eligible for compensation. Several options are offered so that the affected people will not feel cheated or unduly disadvantaged due to the projects. The following options will be available.

Options for all

In the event that land is acquired for the projects, compensation will be given for crop loss or other cultivation loss as well as for the soil.

**Severed Agricultural Land**

In case small parcels of land are divided

When acquisition leaves the owner a parcel of land, which drastically reduces or destroys its economic viability, he shall have the option of offering the remaining land for acquisition for which compensation will be given at a rate not less favorable than the rate of acquisition.

An owner of several parcels of land may offer the entire land for acquisition.

**Injurious Affection**

When the owner wishes to retain the remaining portion of the divided land he will be in a position to claim compensation for depreciation of the portion of land retained, while the compulsorily acquired will receive the scheduled rate of compensation.

**Loss of Access**

In the case access to the land is obstructed or the remaining land becomes land locked. Action will be taken to provide alternate access, or pay compensation or provide alternate land after acquiring the land locked parcel of land.

**Source-Land Unit of Mahaweli Authority Sri Lanka  
Resettlement Plan**

The Planning and Monitoring Unit of Mahaweli Authority Sri Lanka is the agency responsible for planning and monitoring of the resettlement programs. Time schedules for project activities and executing responsibilities will be defined once the fresh updating of feasibility study

The resettlement process is complex and involves a number of agencies. For better coordination a monitoring plan should include the activities listed in follow

<b>Activity</b>	<b>Responsibility</b>
<b>1.Reservoir Area</b> 1.Perimeter Survey and Land Marking 2.Gazettification of the Area 3.Conduct Census of Households 4.Land Acquisition Procedure 4.1 Land Acquisition Survey 4.2 Gazettification of Land Acquisition 4.3 Holding Land Kachcheri 4.4 Establishing Claims for Compensation 4.5 Payment of Compensation 5.Identification and Extraction of Timber 6.Establishment of Mechanism for Participatory Resettlement 7.Preparation of Time Table for Resettlement 8.Transportation of Resettles to Host Area	DS/SD/MASL DS DS/GN/MASL DS SD/DS/MASL DS DS VD/DS DS/MASL FD MASL MASL MASL
<b>2.Command Area/Resettlement Area</b> 1.Construction of Irrigation Network 2.Survey of Resettlement Area 3.Site Clearing 4.Preparation of Resettlement Layout Plan 5.Demarcation of Allotments 6.Offer Allotments to re settlers 7.Providing Food Aid 8.Providing Development Assistance	MASL/CONTRACTORS MASL  MASL MASL MASL MASL MASL
<b>Abbreviation</b> Divisional Secretor Forest Department Grama Niladharis Mahaweli Authority of Sri Lanka Survey Department Valuation Department	DS FD GN MASL SD VD

**Source-MASL Library**

### **Resettlement Package**

The Mahaweli Authority Sri Lanka has a long-term commitment towards the settlers. Settlers in system B, C, G, H, L and Udawalawe continue to be supported long after their settlement. There is yet no cut-off data for withdrawal when the functions can be handed over to Line Departments.

Transport

Displaced persons will be provided transport to the new locations for family members as well as their belonging. Any material recovered from the demolished building too will be transported.

#### Settler Assistance

The Mahaweli Authority Sri Lanka has recommended the assistance to provide to the settlers as a component of the total resettlement package.

Eg. Moragahakanda development project resettlement package

Material to the value of Rs.6000 (tiles or roofing sheets) to build a house and free transportation for their own building materials to the new area.

Free issues of dry rations for five members of the family till they obtain their 1<sup>st</sup> harvest.

Free seed paddy and fertilizer for their 1<sup>st</sup> and the 2<sup>nd</sup> cultivation.

Free agriculture implements such as mamoties, c rowbars, axes, knives.

Free plants such as coconuts, mango and citrus for planting in the homesteads.

Materials to the value of Rs.5000 to build a well for drinking water in the homestead and

Materials to the value of Rs. 3000 to build a toilet (Ceramic water seal squatting).

#### Food Assistance

Assistance will be sought from the world food programme to provide five members of each family with basic rations for a period of 18 months or unit such as they are capable of obtain their first harvest whichever is early.

#### Health Care and Sanitation

This aspect has been a significant migratory measure for the settlers. Health care facilities are provided to all settlers. At the early stage of settlement a mobile unit caters to settler requirements. More permanent arrangement are made as the population stabilizes. A three stages health service system is arranged at Divisional, Sub Divisional and at Gramodaya levels.

The Anti Malaria Campaign has been extended to the Mahaweli Authority Sri Lanka settlement areas. Community wells, shallow and deep wells and pipe borne water for settlers and townships are provided to ensure quality water for drinking and other domestic use.

#### **Issues of Resettlement program**

Guidelines for the Preparation of a Resettlement Action Plan has identified relocation effects on people as loss of physical and non-physical assets including homes, communities, productive land, income earning assets and sources, substance, resources, cultural sites, social structures, networks and ties, cultural identity and mutual help mechanisms. All the above facts can be different kinds of problems and issues after resettlement.

**Some Generating Facilities of the Resettlement Program.**

-Social & Physical infrastructure

-Proper road network.

-Public buildings

(Post office, school, hospital, police station, bus station, government office, shopping complex, agriculture centers, library etc. )

-Electricity

-Banks

-Religion places (Temple, church, kowil etc.)

-Telecommunication

-Water

-Training centers

-Agriculture farms

-Hotels

-Government circuits

-Playgrounds

-Public Parks

New job opportunities

New

factories

etc.

**Present Settlement Progress of Mahaweli systems.**

System	Revised Project Target (Families)				Cumulative Progress Up to end December - 2013(Families)				
	Farmer	Non - Farmer	Cashew	Total	Farmer	Non - Farmer	Sub Families	Cashew	Total
<b>Downstream</b>									
B (Left Bank)	20,060	6,610		26,670	21,350	6,700	2,350		30,400
C	21,130	9,224	527	30,881	21,268	10,894		530	32,692
G	4,751	1,851	320	6,922	4,861	1,545			6,406
H	25,552	13,568		39,120	20,415	10,547			30,962
H - 1	5,212	3,123	238	8,573	5,212	2,971			8,183
L	3,364			3,364	2,339	2,919			5,258
Uda wlawa									
Left bank	12,788	15,914		28,702	8,279	2,677			10,956
Right	10,998	13,287		24,285	15,452	22,382			37,834
(LB+RB)	23,786	29,201		52,987	23,731	25,059			48,790
D	2,214	504		2,718	1,273	352	107		1,732
Rabakan oya	2,273	591		2,864	328	1			329
<b>Total</b>	<b>108,342</b>	<b>64,672</b>	<b>1,085</b>	<b>171,381</b>	<b>100,777</b>	<b>60,988</b>	<b>2,457</b>	<b>530</b>	<b>164,752</b>

Source- Planning and Monitoring Unit of Mahaweli Authority Sri Lanka (2013 data)



### **The current resettlement program of the Mahaweli Development Project.**

The current largest resettlement program in Sri Lanka is the Moragahakanda Kaluganga development project. This is a key project in the “Mahindachinthana policy” of year 2005 and hence the government decided to commence work on this project in year 2007. The project is located in the Naula divisional secretary’s division of Matale district of central province. The proposed reservoir will be constructed across Amban Ganga at a place called Moragahakanda with a water storage capacity of 570 MCM. Around 1581 number of families and fair extent of developed lands will be directly affected. The financial provision allocated for 2013 is Rs.9535 million. Out of this Rs. 2725 million was released from Treasury by end of August 2013. The funds were disbursed on Moragahakanda reservoir saddle dam -1 and main dam construction, preliminary works on Kalu Ganga reservoir dam construction, infrastructures development, and resettlement and environment mitigation related activities. Constriction of administrative buildings of Mahaweli Authority was first priority in aim of facilitating development and resettlement activities.. Two Block Office related building complexes and six Unit Office related building complexes were completed and now in full functional with related staff. Development of Guruwela and new Laggala new towns are on progress. Construction works of post offices, health care centers, administrative buildings, schools were completed. Families who are living in Kaluganga dam construction site were resettled from homes at Guruwela resettlement area and compensations too were already paid. The families affected under Moragahakanda reservoir were provided new lands at resettlement area.

### **Land Use Pattern of Resettlement Area**

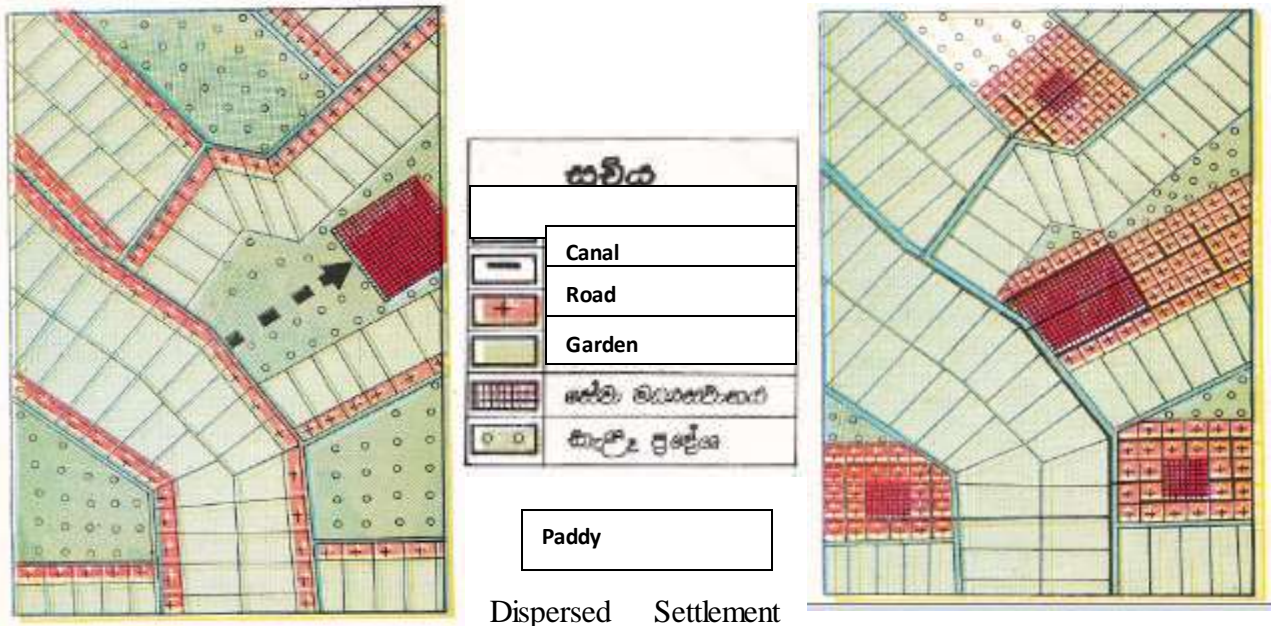
Land use patterns design and planning by planners who are working land use planning unit in Mahaweli Authority Sri Lanka. They are mainly using two resettlement planning concepts.

#### **Dispersed Settlement**

Dispersed settlement is one of the main types of settlement patterns used by landscape historians to classify rural settlements found in England and other parts of the world. Typically, there are a number of separate farmsteads scattered throughout the area. A dispersed settlement contrasts with a Clustered settlement.

#### **Clustered Settlement**

Clustered settlement is one of the main types of settlement pattern. It is one of the terms used by geographers and landscape historians to classify settlements. It is most accurate with regard to planned settlements its concept is one in which the houses, even most farmhouses within the entire associated area of land, such as a parish, cluster around a central church which is close to the village green. Other focal points can be substituted depending on cultures and location, such as a commercial square, circus, crescent, a railway station, park or a sports stadium.



Clustered Settlement  
(Source-Land Use Planning Unit of Mahaweli Authority Sri Lanka)

### 3 Conclusion

The massive resettlement program by Mahaweli development board and Mahaweli development system H,C,B and Victoria, Randenigala and Rantembe reservoir projects under the Accelerated Mahaweli development programme (AMDP). During the time of implementation of AMDP, there was no experience gained on resettlement, in Sri Lanka. Mahaweli Authority Sri Lanka has implemented resettlement programmes in Mahaweli system areas where all infrastructure facilities were also provided. However, resettles were faced with many hardships during the transition period in the form of disruption of relationship with their neighbors and relatives, livelihood disruption and were to be moved to completely different areas. In Mahaweli systems, people were to be resettled at very initial stages of development before the establishment of infrastructure facilities.

When the people are displaced from their established settings, they are generally improvised, because it has been established that cash compensation alone for the loss of property is not sufficient to restore all income losses incurred due to involuntary displacement. To prevent these hardships, sufferings and destitution during the post-resettlement stages, general and the poorest of the poor in particular have to be given special attention to build up their new life with better facilities at the new settlements. As such it is necessary to start some development programs at the initial stage, for the landless and elderly households. A sustainable income

generation programmes will be designed prior to the dislocation and will be implemented as soon as they are resettled in resettlement area. A set of development activities aimed for economic reestablishment of those vulnerable groups will be implemented until they become self-sustained.

### **Reference**

- Mahaweli Authority web site (<http://mahaweli.gov.lk>).
- Mahaweli Authority, "Resettlement Framework" (2010), Mahaweli water security investment program publication.
- Land Use Planning Unit of Mahaweli Authority.
- Planning and Monitoring Unit of Mahaweli Authority.
- Land Unit of Mahaweli Authority.
- McDowell C and Morrell G (2007), "Development and Displacement: Institutionalizing responsibility", Society for Institutional Development.
- "Resettlement Implementation Plan For the Moragahakanda Agriculture Development Project" publish by Mahaweli Authority. (2010)

## **An Analysis of the Satisfaction Level of Resettled People: A Case at Mihindu Senpura Housing Program**

**K.V.P.P.Kulasinghe<sup>1</sup>**

<sup>1</sup>Undergraduate, Department of Estate Management and Valuation  
prathiba.patali@yahoo.com

### **1. Introduction**

In the world context people are resettled to the new location due to the various reasons. Such as natural disasters or development projects etc. (William, 1989). Within last 20 years more than 20 million people have been resettled to the new locations world widely. For homeless people who are re-housed, the outcomes of interest are not only tenancy sustainment but also housing satisfaction, well-being and the achievement of independence. The Internally Displaced People are defined by the United Nation as, “persons or groups of persons who are forced to leave their lands or homes or their possessions as a result of a development process that undermines, excludes or ignores their full participation in development and put their livelihoods in danger without protection within a given national territory (Quoted in Feleke, 1999 as cited in Kebede, 2001).

Until the late 1980s, in UK they provided basic shelters to the people who don't have houses. But in these periods these types of rehousing and rehabilitation programs have been launched in a very simple manner. But then again with the government intervention, attention towards the resettlement got priority. When we considering about the resettlement practice in England practice which is included in those country has different variations. In many European countries they have accepted that the hostels are inappropriate as long term accommodation for homeless people and that the goal should be resettlement into mainstream housing (Busch-Geertsema&Sahlin, 2007).

Resettlement is defined as the process by which individuals or a group of people leave spontaneously or spontaneously their original settlement sites to resettle in new areas where they can begin new trends of life by adopting themselves to the biophysical, social and administrative system of the new environment. During this process resettles may face both physical and mental stress. The movements can either occur due to the migration, refugee and mobility or emergency and forced resettlement process that are distinguished from resettlement scheme. Resettlement can cause deterioration in production systems, which results in food insecurity, marginalization and loss of income. Such deterioration may be due to loss of productive capacity such as land, common property resources, jobs, societal health and community articulation.

Resettlement programs have predominantly focused on the process of physical relocation rather than on the economic and social development of the displaced and other negatively affected people. This has severely eroded the development effectiveness of resettlement and rehabilitation programs and heightened the impoverishment risk of the resettles. According to Cernea (1998) risks to adversely affected people are not a component of conventional project analysis. The key economic risks to affected people are from the loss of livelihood and income sources such as arable land, common property resources such as forests, grazing land, ground and surface water, fisheries, etc. and changed access to and control of productive resources. The loss of economic power with the breakdown of complex livelihood systems results in temporary or permanent, often irreversible, decline in living standards leading to marginalization. Higher risks and uncertainties are introduced when diversified livelihood sources are lost. Loss of livelihood and disruption of agricultural activity can adversely affect household food security, leading to under-nourishment. Higher incidence of diseases associated with deteriorating water quality can result in increased morbidity and mortality. High mortality rates, immediately after involuntary resettlement in Kariba and High Aswan dams, are cases in point. As Cernea notes (1998), forced displacement tears apart the existing social fabric, leading to socio-cultural disarticulation.

Since the 1980s resettlement policies and programs for homeless people have become more elaborate, and housing responsibilities have been devolved from Westminster to Scotland, Wales and Northern Ireland. Although this has led to differences in homelessness alleviation policies and funding, resettlement policies and practice have developed similarly across the UK (Wilcox et al., 2010). In response to an increase in street homelessness in central London, in 1990 the Conservative government launched the Rough Sleepers Initiative (RSI) (extended to other towns and cities in 1996). The RSI provided street outreach workers and temporary and permanent accommodation, which led to fewer rough sleepers and to the upgrading of resettlement work. To reduce rough sleeping further, the succeeding Labor government strengthened the spectrum of support from the streets to independent accommodation and introduced less tolerance of those who refused assistance.

All of this can lead to unstable livelihoods, declining standards of conduct and uncertainty of construction and development (Croll, 1999b). Under spontaneous resettlement, people who going to be resettled in a new place will break up their ties with their original places. The worsening of ecological conditions, land use problems, land scarcity, ethnic conflicts and natural hazards in the original settlement can lead to have a new resettlement.

A resettlement scheme may be defined as a planned program to transfer of the people most probably through selection and control from one region to another.

There are four aspects of resettlement that must be in place to mitigate impoverishment: adequate policies, adequate legal attention, adequate planning and adequate organization (Cernea, 1997). It is necessary to develop production-based strategies that assist with employment of residents after resettlement. It is also necessary to plan approaches that avoid negative environmental effects for the next generation, including increased population density and decreased availability of natural resources. Thus far, social justice and equity are absent in resettlement programs. Therefore, every development program that entails resettlement must take social equity into consideration to prevent impoverishment and to avoid resettlement without rehabilitation.

Involuntary resettlement is characterized by four stages (Scudder, 1997). The first two steps are relocation and adaptation to new situations and occupations. Along with the emotional and financial importance of readjustment, many residents of resettlement villages experience a drastic decrease in their income and their standard of living. Also, many people cease investing once they know they must leave their community, and therefore income and assets at the time of relocation are often lower than expected. The third step is economic and community development and the fourth step is consolidation. In most cases resettlement projects do not achieve the third stage. Therefore, it is necessary to develop a comprehensive resettlement program that provides “the gains, not just the pains, of development” (Cernea, 1999, p. 4).

This research will study about the satisfaction level of the resettled people in Mihindu Senpura housing program which is situated in Dematagoda, Colombo 09. This project is implemented under the Ministry of Defense but now this project is handled by the Ministry of Urban Development, Water Supply and Drainage. Under that project there were 320 families were relocated in 2009 and 500 families in year 2013 and they have relocated in Thousand Low Income Housing Project at Dematagoda. Although located in the same region, the original living places exhibited different income levels, equality, and forms of production.

Most of them were low income people and most of people have lost their income generation activities and have to face so many economic problems. This project is implemented without launching awareness program to the new resettlers. Therefore this project has some kind of issues relating to the physical environment, and socio-economic aspects. So this will be an analysis of the level of satisfaction regarding new living condition of resettled people.

### **Statement of the Problem**

Every country implements development projects to make their country better place to its citizen. But when implementing development projects there is a possibility to have a new resettlement projects. Then it is necessary to move the people of the area

where development project going to be start, to the new location. So there is a high possibility to occur dissatisfaction of the resettlers regarding the physical environment and socio economic environment. Physical resettlement is the actual physical relocation of people resulting from loss of homes, productive assets, or access to productive assets. Economic resettlement results from an action that interrupts or eliminates people's access to productive assets without physically relocating themselves. (Hand book for Preparing a Resettlement Action Plan 2003) Regarding the Mihindu Sempura Housing program there are these types of problems. Because these people were resettled by the government under the supervision of Ministry of Defense (but now this program handle by the Ministry of Urban Development, Water Supply and Drainage) without implementing the awareness programs.

As well as these people came from different locations and mainly these people are in middle income and low income level. There are main issues such as many people have lost their income sources because of the change of their residential location. Many of them do not attend offices and mainly doing labor jobs such as masonry works, needle work, making shopping bags, servant jobs etc. therefore now they have lost their income. Due to the different types of people there are some social problems as well. Many of people came from slums and shanties therefore there are some behavioral problems of them. Management told G+4 blocks do not have elevator facilities and there are some maintenance problems as well. Theft and not having respectable environment is another problem. There are one category of resettlers came to this new location and those people are doing government jobs and they had good living condition previously as well. They are having problems with layout and design of the houses and services provided by the management.

#### Significance of the Study

To have better country it is very important matter to give better living conditions to its citizen. For that it is very essential to ensure the housing facilities of the people. Because need for a house is a basic need of the people. Therefore as a government, they implement many resettlement projects special reference to the people who live in slums and shanties, unauthorized lands. However these resettlement programs may affect resettled people, either healthy or unhealthy manner due to many reasons. . Problems which can be occurred one year after resettlement will be different from the problems which can be occurred after five years of resettlement. Therefore it is very important to implement awareness program to the resettlers about the housing project before resettle those people to the new location. As well as relevant policy makers and decision makers should ensure and should be capable enough to solve down the issues which can be occurred in near future. Otherwise resettlers will dissatisfied with their living conditions.

## **2. Literature Review**

This chapter mainly helped to identify the study area, collect fact and identify the variables relevant to the study. For that purpose mainly go through the text books, journals and journal articles, research papers and electronic documents, websites etc. This chapter includes some facts about the key areas of the research. Such as displacement, resettlement, relocation, resettlement issues, life style changes and new living condition etc.

### **Identification of Resettlement**

Resettlement, is a multisided opportunity for the reconstruction of systems of production and human settlements that represent a development in the standard of life of those affected, as well as in the regional economy of which they are a part. Therefore “resettlement”, must also be development oriented and planning must take into account that the social and physical infrastructure, school and health services, access to employment opportunities, and housing plot allotments and dwellings will meet expanded needs (Smith, 2001).

Rehabilitation can be envisioned as a process that would reverse the risks of resettlement. Cernea suggests a risk and reconstruction model of rehabilitation that would be marked by a series of transitions from:

- Landlessness to land-based resettlement;
- Joblessness to re-employment;
- Food insecurity to safe nutrition;
- Homelessness to house reconstruction;
- increased morbidity and mortality to improved health and well-being, and
- Social disarticulation and deprivation of common property resources to community reconstruction and social inclusion (Cernea M.M. 1998:47).

It can assume that if people have not satisfied with something, they may have problems regarding them. However through this study it can be found out some socio – economic and housing issues which are suffering resettled people as follows.

No enough facilities for recreation

Drinking water is not clear enough

Large families not enough space in their houses

Security issues

High water bills and electricity bills

Difficulties occur when children entering to schools

Not having interest to their houses and incapability of transferring them

Distance proximity of main service centers, working places and religious places

High living cost and not enough income opportunities

Macro (project)influences include the purposes of the resettlement, the supply and price of alternative accommodation, the distance of migration, employment



possibilities, and the resulting dispersion or concentration of relocations. Mid-scale (community) factors concern the ethnicity of the displaced, the extent of social benefit, and the performance of the resettlement agency (Reynolds 1961, 1964). More specific are household elements such as level of community identification, social situation, preparedness for change, and so forth.

Within this context, the socio-economic, cultural and political factors (hereafter the term “social factors” is used to represent socio-economic, cultural and political factors influencing the success of resettlement programs) are not mutually exclusive to spatial factors of resettlement programs. Rather, those factors are impacted by the decisions on spatial arrangements and vice versa. For example, as a part of the post December 2004 resettlement strategy, to strengthen the resilience of coastal communities for similar disasters in the future, the central government of Sri Lanka announced a 200m (100m in some areas) coastal buffer zone for all reconstruction (and new construction) work. With reference to resettlement challenges, Kinsey and Binswanger (1993) stated that resettling affected communities away from their original habitats without recognizing their original socio-economic and cultural characteristics (e.g. livelihood, ethnic and religious mix, etc.) can cause problems. In addition, as Dikmen (2002) noted, political reasons (e.g. territoriality, leadership structures) can also limit the success of resettlement programs. On the other hand, spatial factors (e.g. size of livable space provided to affected communities, access and distance to infrastructure and facilities, land availability, etc.) also add constraints when implementing a resettlement program (Bartolome et al., 2000).

However, that had a major impact on the livelihood of the affected communities (mainly fishing) and it escalated into a large social pressure, eventually resulted in significant changes to the original policy (Shaw and Ahmed, 2010). Within this context spatial analysis is a widely used technique to extract data and to identify relationships between spatial data and other entities. Among many functions of spatial analysis, the ability to investigate patterns in spatial data and modeling the relationships to understand or predict any phenomena (Fotheringham and Rogerson, 2005) can be highlighted as key features which are useful in formulating resettlement strategies. Due to this reason spatial analysis has been proposed as a suitable technique to evaluate the interdependencies of social and spatial factors in post-disaster resettlement programs. Although the social and spatial factors related to the success of resettlements have been studied independently and in detail (Dikmen, 2002; Corsellis and Vitale, 2005; Muggah, 2008), so far, only a little emphasis has been given to understand the interdependency of these factors within the context of post-disaster resettlements. This gap in the subject knowledge has defined the scope of this study where the aim was to develop a framework to assist the design and implementation of resettlement programs, with the view of improving their success through better coordination between spatial and social factors.

Displacement is seen as the result of a model of development that enforces certain technical and economic choices without giving any serious consideration to those options that would involve the least social and environmental costs. Most displacement has been involuntary. There has been very little meaningful participation of affected people in the planning and implementation of the dam project, including the resettlement and rehabilitation aspects. The displaced and other affected people have often been the last to receive any meaningful information on the dam project. What information they have received has typically been limited and provided very late in the planning and implementation of mitigation measures.

There have been instances of the submergence of land and other property, and of displacement without prior and sufficient warning of the impending filling of the reservoir. The displacement literature bears testimony to traumatic forced and delayed relocation, and to the denial of development opportunity for years and often decades due to a long and uncoordinated displacement and resettlement process. The numbers of both directly and indirectly affected people have frequently been underestimated, and there has been an inadequate understanding of the exact nature and extent of the negative effects involved. (World Commission on Dams, 2000).

The Guidelines for the Preparation of a Resettlement Action Plan, published by Ministry of Lands in Sri Lanka (2003), has defined Involuntary Resettlement (IR) as the unavoidable displacement of people arising from development projects that creates the need for rebuilding their livelihood, income and asset bases in another location.

The Guidelines for the Preparation of a Resettlement Action Plan, published by Ministry of Lands in Sri Lanka (2003), relocation is defined as moving affected persons and their movable assets, rebuilding housing and, improvements to land and public infrastructure in another location. And also it has defined the word Rehabilitations re-establishing and improving incomes, livelihoods and social systems. Positive resettlement and rehabilitation is not merely, or even principally, a matter of efficient planning and implementation. There is a power element inherent in some people having the legal, administrative and military means to oblige other people to move. It is usually the less powerful and less well-off who are resettled and they are very often further prejudiced by the difficulties and complexities of the resettlement and rehabilitation process. (Bartolome et al. 1999).

Furthermore it says most development projects have the potential to create resettlement effects. Development projects that change patterns of land use, water and other natural resources generally cause resettlement effects. Resettlement effects may be either physical or economic. Physical resettlement is the actual physical relocation of people resulting from loss of homes, productive assets, or access to productive assets. Economic resettlement results from an action that interrupts or

eliminates people's access to productive assets without physically relocating themselves.

According to Resettlement Authority Act No 09 of 2007 internally displacement person means, person who have been forced or obliged to flee or to leave their homes or places of habitual residence in particular as a result of or in order to avoid the effects of armed conflict situation of generalized violence.

According to Involuntary Resettlement Source book, published by the World Bank (2004), resettlement covers all direct economic and social losses resulting from land taking and restriction of access, together with the consequent compensatory and remedial measures. Furthermore it says Resettlement is not restricted to its usual meaning of physical relocation. It can, depending on the case, include (a) acquisition of land and physical structures on the land, including businesses; (b) physical relocation; and (c) economic rehabilitation of displaced persons (DPs), to improve (or at least restore) incomes and living standards.

According to National Resettlement Policy, published by Government of Pakistan (2002), "Resettlement" means all measures taken to mitigate any and all adverse impacts, resulting due to execution of a project, on the livelihood of the project affected persons, their property and, includes compensation, relocation and rehabilitation.

That same publication has defined the "Rehabilitation" as assistance provided to project affected persons seriously affected due to the loss of proactive assets, incomes, employment or sources of living, to supplement the payment of compensation for acquired assets, in order to achieve full restoration of living standards and quality of live.

National Resettlement Policy, published by Government of Pakistan (2002), has defined the word "Relocation" also. According to that relocation means moving of monuments, shrines, educational institutions, playgrounds, pastures, a village 'shamlat', etc. and rebuilding the commensurate housing, assets, productive lands and public infrastructure etc in another location.

The Handbook for Preparing a Resettlement Action Plan says, displacement may either be physical or economic. Physical displacement is the actual physical relocation of people resulting in loss of shelter, productive assets, or access to productive assets, such as land, water and forests. Economic displacement results from an action that interrupts or eliminates people's access to productive assets without physically relocating the people themselves.

As per my view resettlement is a process of moving people to a different place to live, as they are no longer allowed to stay in the area where they used to live, because that land has to be acquired for development projects. Resettlement can be happened voluntary or involuntary. When it happen involuntary it will creates many problems. In many cases the focus of resettlement programs is simply to get people to move .out of the way. to the resettlement sites as quickly and smoothly as possible. A number of submissions and cases in the WCD.s review highlighted the exercise of intimidation, violence, and even murder to compel communities to move. Once people are relocated or even shifted out the resettlement program usually fizzles out or loses momentum, with the displaced people now at their most vulnerable. The resettled people are most vulnerable to be forgotten once the physical relocation is complete, a waning of interest sometimes referred to as developer's fatigue. (Argentina Report 1999).

Simply restoring the status quo ante in terms of material assets will thus leave people worse off than before. Therefore the main objective of a resettlement program must be to improve the standard of living and not just restoration of pre-relocation standards of living. While the restoration of pre relocation standards is still echoed in several resettlement programs there is enough evidence to indicate that this goal is limited and inadequate (Scudder, T. 1997).

### **Types of resettlement**

#### **Rural Resettlement**

Displacement of people in rural areas typically results from a project's acquisition of farm land, pasture, or grazing land or the obstruction of access to natural resources on which affected population rely for livelihoods (for example , forest products, wildlife and fisheries). Major challenges associated with rural resettlement include: requirements for restoring income based on land or resources; and the need to avoid compromising the social and cultural continuing of effected communities, including those host communities to which displaced population may be resettled.

#### **Linear Resettlement**

Linear resettlement describes projects having linear patterns of land acquisition (highway, railway, cannels, and power transmission lines). In sparsely populated rural areas, a linear project such as an electric transmission line may have minimal impact on any single landholder. Compensation is characterized by a large number of small payments for the temporary loss of assets such as standing crops. If well designed linear projects can easily void or minimize the demolition of permanent structures conversely in a densely populated urban area, a linear project such as a road upgrading may require the demolition of structure along the project right- of-way, thereby significantly affecting large number of people. Linear resettlement contrast with site-specific resettlement, because of the problems that frequently arise

when resettlement action have to be coordinated across multiple administrative jurisdictions and/or different culture and linguistic areas.

### **Site – Specific Resettlement**

Site-specific resettlement is associated with discrete, nonlinear projects such as factories ports, highway interchanges, hotels, commercial plantation, etc., where land acquisition encompasses a fixed area. However, Site-specific resettlement is associated with mining and other extractive industries such as oil and gas may require progressive land acquisition over long periods. As a result, displacement of communities may occur in phases over a number of year's even decades. Communities threatened with displacement at some future date often prefer to maintain in place until resettlement is absolutely necessary. The major challenge in such incremental resettlement is maintaining a consistent approach to compensation and income restoration over the life of the project. Similarly, the construction of reservoirs for hydropower and irrigation projects can result in significant economic and physical displacement of rural communities.

### **Resettlement in World Context**

As a matter of fact many studies of resettlement projects invariably highlight the sufferings of people that occur due to changes in their places of living and the livelihoods (Viratkapan et.al 2006). Although, from the perspective of displaced people, forced resettlement is always a disaster, the resettling agencies often assumed that the resettlement programs they design is often successful.

Economic development can be happened in any area mainly according to Development projects in those areas. Governments which are ruling of this areas try to implement various development projects suitable for this areas from identified various investigation methods. Around the world millions of people are being displaced due to various development projects, natural disasters etc. (William, 1989). As stated by Kumarasiri (2009), during the last twenty years more than 20 million people worldwide have been compelled to move from their homes to make room for massive development projects. On the other hand, aftermath of lanina 2010, tsunami 2004 and 2011, millions of people have been displaced in countries like Australia, Pakistan, Brazil, Japan, Indonesia etc. including Sri Lanka. As a result “resettlement of these displaced communities” has been a subject widely discussed for the last three decades; centering around various impacts on re-settlers, with a particular focus on socio-economic hardships etc.

Development projects such as dam construction projects, highway projects, road construction projects, road widening projects, port construction have displaced people largely. According to Wjesinghe (2010) mostly resettlement can be occurred due to mega events such as Olympic Games, Common wealth Games and Football World Cup have adversely affected to the millions of people.

Extrapolating from World Bank data to derive estimates of global figures, the study concluded that, in the early 1990s, the construction of 300 high dams (above 15 meters) each year had displaced four million people. While an estimated 25 million people are displaced worldwide by conflict, the number of people uprooted by development projects is thought to be much higher. In 1994, a study of all World Bank-assisted development projects from 1986-1993 that entailed population displacement found that just over half were in the transportation, water supply and urban infrastructure sectors.

Urban and transportation infrastructure projects accounted for six million more displaced each year (Development – Induce Displacement). Construction of dams for irrigation and hydropower generation has been one development initiative that caused mass scale population displacement in many countries. Wijesinhe has furthermore described that inundation due to construction of reservoirs and canals as well as government's densification plans has involuntarily relocated millions of people. In the case of Three Gorges Dams Project in China which is the largest electricity generating plant, over 1.3 million people were displaced in addition to flooding of many archaeological and cultural sites. And also in the 1950s China built the Danjiangkou Water Conservancy Project in Hubei Province, which was at that time the largest dam in China. Danjiangkou reservoir caused to displace 382,000 people. In that era China had not formulated a Resettlement Policy; hence no resettlement plan was developed with baneful results for displaced. Those forced from their homes could not acquire adequate living and production conditions in the new communities after relocation.

Involuntary resettlement and economic development involuntary resettlement has the potential to impoverish significant numbers of displaced people (Cernea, 1997). Such resettlement results in loss of productive capacity due to landlessness, joblessness, homelessness, marginalization, food insecurity, loss of access to common property resources, increased morbidity, and community disarticulation (Cernea, 1997, p. 1569). The impoverishment of displaced persons is typically the main pitfall in development caused involuntary population resettlement. Cernea (1997) developed his "risks and reconstruction model" to address this pitfall. Such a tool is necessary to fully understand the nuances of losing one's natural, physical, human and social capital as a result of sudden resettlement. Appropriate rehabilitation programs are required to restore this loss of productive capacity. It is also important to protect and restore displaced people's livelihoods by implementing an equitable resettlement program (Cernea, 1997). Resettlement can cause deterioration in production systems, which results in food insecurity, marginalization and loss of income. Such deterioration may be due to loss of productive capacity such as land, common property resources, jobs, societal health and community articulation. All of this can lead to unstable livelihoods, declining

standards of conduct and uncertainty of construction and development (Croll, 1999b).

Losing one's property (depending on the value of that property) is typically a main indicator of impoverishment in involuntary displacement (Mahapatra, 1999). Expropriation of land removes the first principle upon which people's productive systems, commercial activities, and livelihoods are constructed. This is the predominant method through which displaced persons are DE capitalized and pauperized, as they lose both real and manufactured capital (Cernea, 1997). For those ousted from their former situations it is not enough to simply re-establish these resources; rather, the goal should be to re-establish the residents of resettlement villages in such a way that they can experience sustained economic growth in the future (Schuh, 1993).

Successful resettlement that mitigates the risk of impoverishment requires appropriate design and planning (Croll, 1999a). It is necessary to sustain the pro-employment process of development in resettlement villages because short-term employment will not provide long-term stability. Also, a remote resettlement location with scarce resources hinders the rehabilitation of productive activities. A very close link between relocation and development is an important ingredient for maintaining and improving the stability of the community.

The construction of Sardar Sarovar Dam across river Narmada in India was one of the most controversial dam projects. World Bank was the initial funder for the project but the bank later withdrew funding due to various issues. The estimated number of families that were displaced due to the construction of the reservoir was 41,000 (Scudder, 2003). About 10,000 fisher families were left without livelihoods due to stoppage of downstream river flow during non-monsoon periods due the dam.

According to Altinbilek et al (2010) Resettlement takes place when major construction projects, which are most important element of development force people who have lived in a region for a long time to leave their home and any other immovable properties, their place in society, economic and agriculture activities, relationships and opportunities, to live other places. When projects are implemented it is necessary to acquire the lands in projected area. In such situation people are dislocated and then project implemented agencies have resettle those people in other place. Not only the development projects but also civil war natural disaster also may be a reason for resettlement.

As above described, resettlement has done in many other countries. Madagascar also has such resettlement experience. The Antananarivo Plain Development Project in Madagascar implemented to improve the living conditions of the low-income households of the low-lying areas of the city and in the Antananarivo Plain, and to

increase the productivity of the industries and farms of the plain. These aims were to be achieved through the following measures: providing flood protection; expanding drainage and sewerage facilities; the rehabilitation of some irrigation systems; improvement of local government revenue; and institutional strengthening. However the preliminary estimate was that 3,500 persons would be displaced by the project works. This number included many who had built houses, generally without authorization, on the dikes along the Mamba River and the Andriantany Canal.

### **Resettlement in Sri Lankan Context**

During the Accelerated Mahaweli Development Program (1980 – 2000) comprising several large reservoirs such as Kothmale, Victoria, Randenigala, Rantambe and Maduru Oya, entire cities had to be resettled due to complete inundation. This uprooted thousands of families from their traditional villages, social connections and fertile agricultural fields in the intermediate zone with a mild climate to irrigated new lands in the dry zone with harsh climatic conditions. Compensation was paid but it was limited due to the inability of most people enjoying traditional lands to produce legal title deeds to their properties (Muggah, 1998 as cited in Wjesinghe 2010). According to him, the top-down planning and implementation of the project failed to address the wishes and needs of both resettlers and host communities bringing about impoverishment and social tension.

Various types of resettlement projects can be seen in Sri Lanka time to time under the various governments. Those resettlement projects have done because of development projects, civil war or natural disaster. According to the thesis of factors contributing to the failure of development induced resettlement projects (2010), the first recorded case of development induced forced resettlement is the case during British rule when the colonial rulers acquired land otherwise enjoyed by the locals under customary ownership for plantation development. Furthermore it says this has displaced thousands of Sinhalese farmers living in the up country without compensation and Indian Tamils were brought into work in the plantations for cheap labor and settled in improvised row-housing called line rooms.

Gal Oya Irrigation Project implemented during the period of 1948 – 1952 was the largest and first post independent multipurpose development project implemented in Sri Lanka. The main objectives of the project were to provide irrigated land for agricultural purposes as well as to density the area. Approximately 80,000 were settled into 40 colonies along irrigation canals during this period (Muggah, 1998 as cited in Wjesinghe 2010). Then in more recent times large scale relocation and resettlements were carried out due to construction of reservoirs for agricultural and hydroelectric generation

There were two resettlement alternatives for the families being affected by the dam construction project. The first was to stay close to the reservoir, and receive smaller



land plots. The other was to settle in newly developed areas for Mahaweli Development Program, being located within 100 km from original villages, but receive larger, irrigated land plots. There had been an involuntary resettlement caused by construction Kothmale Dam in Sri Lanka. Within the comprehensive water resource development program in Sri Lanka under the Mahaweli Accelerated Development Program, Kothmale Dam was constructed in 1985 with the purpose of hydroelectric power generation and irrigation water supply. This Construction caused 3000 households to be evacuated and relocated.

Not only that Sri Lanka has resettled war affected people in Northern Province. After finishing the civil war Sri Lankan Government has started the resettlement projects in Northern part of the country.

### **3. Conclusion**

Persons or groups of persons have to leave their lands and homes or their possessions due to the various reasons such as natural disasters or potential development projects etc. However these types of resettlements become more successful, if it considers not only tenancy sustainment but also housing satisfaction, social and economic well-being and achievement of independence. Therefore, it is considered before people put into the new location doing re-housing and rehabilitation programs are a very essential thing. Resettlement programs become failure because of the physical and mental stress faced by the resettlers. These dissatisfactions are mainly arising through insecurity, marginalization and loss of income, productive capacity such as land, common property resources, jobs, societal health and community articulation. Therefore to have successful resettlement projects there should be mutual understanding between officials of local government, community leaders, and other representatives.

### **References**

- Anthony M. Warnes , Maureen Crane & Sarah E. Coward (2013) Factors that Influence the Outcomes of Single Homeless People's Rehousing, *Housing Studies*, 28:5, 782-798
- David Wadley & Michael Ballock (1980) Satisfaction and Positive Resettlement: Evidence From Yallourn, Latrobe Valley, Australia, *Journal of the American Planning Association*, 46:1, 64-75
- <http://www.defence.lk/> (accessed date 16-08-2015)
- International Displacement Monitoring Centre (2012), "Development-Induced Displacement"
- Jayasinghe N C (2011), "Employees Perception on the Effectiveness of Training and Development Programs at the Banking Sector in Sri Lanka", pp. 386-393

- Kebede K (2001), “Re-Relocation and Dislocation of Communities by ‘Development’ Projects: the Case of Gilgel Gibe Dam in Jimma Zone”, Addis Ababa University, Ethiopia
- Ministry of Defense and Urban Development (2012), “Metro Colombo Urban Development Project- Social Screening Report and Abbreviated Resettlement Action Plan”, Sri Lanka
- Ministry of Highways and Road Development (2008), “Resettlement Planning Document”, Sri Lanka
- Naruhiko Takesada *et al* (2008), “Resettlement Choice and Long Term Consequences of Involuntary Resettlement Caused by Construction of Kotmale Dam in Sri Lanka”, Blackwell Publishing Asia Pty Ltd, Japan
- National Water Supply and Drainage Board (2013), “Sri: Greater Colombo Water and Wastewater Management Improvement Investment Program (Towns East of Colombo District Water Supply Project)”, Colombo, Sri Lanka
- Sendut H (1962), “the resettlement Villages in Malaya”, Geographical Association, Vol. 47, pp. 41-46
- TGUP Perera, Indu Weerasoori, HMLP Karunaratne An Evaluation of Success and Failures in Hambantota, Siribopura Resettlement Housing Program: Lessons Learned, pp 01-15
- Wijayasinghe S L D K (2010), “Factors Contribution to the Failures of Development Induced Resettlement Projects: A Case Study of the ‘Sahaspuara’ Slum Relocation Project, Colombo, Sri Lanka”, Unpublished M.Sc. Dissertation submitted to the International Institute of Urban Management of Erasmus University Rotterdam

To be successful in real estate, you must always and consistently put your clients' best interests first. When you do, your personal needs will be realized beyond your greatest expectations.

-Anthony Hitt

“Real estate cannot  
Be lost or stolen, nor  
can it be carried away.  
Purchased sense, paid  
for in full, and  
managed with  
reasonable care, it is  
about the safest  
investment in the  
world.”

-Franklin D. Roosevelt



Tele/Fax: +94.11.2802004

Web: <http://www.sjp.ac.lk/fmsc/emv>

