

**A STUDY OF THE EMERGING INTEREST IN
WATERFRONT DEVELOPMENTS
WITH THE CONCEPT OF GEOMENTALITY**
with special reference to Colombo

S.C.M. Senevirathna

108971N

Degree of M.Sc. in Town & Country Planning
2011/2014 Programme

Department of Town & Country Planning

University of Moratuwa
Sri Lanka

December 2015

**A STUDY OF THE EMERGING INTEREST IN
WATERFRONT DEVELOPMENTS
WITH THE CONCEPT OF GEOMENTALITY**
with special reference to Colombo

S.C.M. Senevirathna

108971N

Dissertation submitted in partial fulfillment of the requirements of
Master of Science Degree in Town & Country Planning
2011/2014 Programme2

Department of Town & Country Planning

University of Moratuwa
Sri Lanka

December 2015

DECLARATION

“I declare that this is my own work and this individually supervised research project report does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text”.

Also, I hereby grant to University of Moratuwa the non-exclusive right to reproduce and distribute my thesis/dissertation, in whole or in part in print, electronic or other medium. I retain the right to use this content in whole or part in future works (such as articles or books).

.....

Name of the Student - S. C. M. Senevirathna

Registration Number - 108971N

Group - 2010 / 2012

Date -

CERTIFICATION

I certify herewith that S. C. M. Senevirathna Registration Number: 108971N of the Honours Degree of M.Sc.in Town & Country Planning 2010/2012 Group, has prepared this Master Dissertation under my supervision.

.....
Signature of the of Principal
Supervisor

.....
Head of the Department
Town & Country Planning

Date

Date

ACKNOWLEDGEMENTS

I offer my gratefulness to the principle supervisor Dr. Jagath Munasinghe Senior Lecture, Department of Town & Country planning, University of Moratuwa for the guidance and valuable instructions rendered to me throughout this study.

I am grateful to Dr. Rangajeewa Rathnayake, Head of the Department of Town & Country Panning, University of Moratuwa and Professor P.K.S.Mahanama, Dean of the Faculty of Architecture of University of Moratuwa for their Valuable Advice and encouragement.

I would like to pay my sincere gratitude to Planner K. D. Fernando, Senior lecturer, Planner A. L. Susantha, Senior lecturer, Mrs. Malani Herath, Senior lecturer and Mrs. Shalini Mariyathas lecturer of the Department of Town & Country Planning, University of Moratuwa for their valuable support throughout my studies at the Department of Town & Country Planning.

Further, I shall pay my sincere appreciation to Mrs. Prathibani Bandusena, lecturer of University of Moratuwa for the encouragement and the support provided during the research work.

Further, I like to give my great appreciation to Mr. W.P.G.S Withana, Librarian of UDA and other UDA staff for give their valuable ideas, data and information to success this task. Finally, it is my pleasure to keep all my remaining appreciation to the rest who helped me many ways for the success of this endeavor.

ABSTRACT

The Urban waterfront have become increasingly important at different levels and in diverse aspects. It plays a significant role for the developments of an urban area which gives many values to the people such as flood management, ecological and environmental balance and control of urban heat. When consider the world context, demand for waterfront developments is very high due to the various reasons. This situation influences to change the natural setting of waterfront characteristics to man-made characteristics.

Even though demand for waterfront land is increasing, no adequate guidance and prerequisite demand mechanism are established. Many projects have been launched spending enormous resources to recover the damage of waterfront environment by relocating and renovating of existing buildup environment from time to time Nevertheless, their results were failed to prevent that waterfront environment. The reason for that lack of proper planning approach and lack of knowledge base for awareness contributed to the waterfront developments.

Although, economic and environmental forces have been studied in the waterfront developments, the socio-cultural and psychological forces behind the development demand for waterfronts are not adequately studied. Therefore, there is a gap in knowledge in understanding of the influence of the socio-cultural forces.

The broad objective of this study is to investigate the forces that promote the increasing demand for waterfronts for developments in Sri Lanka. In order to develop a knowledge base for awareness regarding the emerging demand as an outcome of the broader socio-economic transformation.

Bolgoda lake waterfront area in Kesbewa Municipal Council limits was selected for this study. Interview based survey was conducted in 2015, during which key attributes caused to increase demand for waterfronts were examined. Size of the randomly selected sample is 50 and data were analyzed using cluster analysis technique, content analysis method and MS Excel. Study was carried out with reference to the concept of Geomentality.

Public perceptions regarding to the demand for waterfronts and key attributes associated with the characteristics of Geomentality were investigated. Accordingly,

this study was revealed that there is strong combination between demand attributes and Geomentaity.

In the psychological analysis, the concept of Geomentality explains as a systematically organized part of environmental perception. According to the analysis, majority of the demand attributes related to the attitude based responses were mostly reflected Geomentality characteristics such as Relaxing, Cool environment, Quite and Calmness and also these attributes are prior to the demand. Although the Geomentality is the causative factor behind the increasing demand for waterfronts, some other factors which are not reflected Geomentality characteristics are also effected for the demand.

Further Geomentality of the respondents was checked by author using some variables. According to the results of the variables analyzed using by MS Excel, it was indicated that value of Geomentality based variables is greater than the value of the non-Geomentality based variables. Further it was revealed that the majority of the identified Geomentality attributes were reflected by the high income social group.

Finally, it can be concluded that the water is most important planning element which is comfort of human in physical and psychological. In addition, it brings existing environment in a number of features in term of aesthetic and functional.

Examining these views, present study can help to obtain a better understanding to bridge the gaps between the professional and general public as well as provide the means, by which to develop a knowledge base for awareness.

CONTENT

	Page No.
Declaration	i
Certification	ii
Acknowledgement	iii
Abstract	iv-v
Content	vi-viii
List of figures	ix
List of tables	x

CHAPTER 01 - INTRODUCTION

1.1	Research Background	01
1.2	The Problem Statement	02
1.3	Objective of the Study	04
1.4	Scope and Limitation	04

CHAPTER 02- LITERATURE REVIEW

2.1	Introduction	05
2.2.	The Environmental Determinism and Concepts	05
	2.2.1 Effect of the Environmental Psychology to Waterfront Living	05
	2.2.2 Behavioural Geography and Waterfront Amusement	07
2.3	Research from the point of view of Users	09
2.4	Urban Waterfront Development as a Strongly Preferred Area	11
2.5	Research on Geomentality and Perceptions on the necessity of waterfront Development	12
	2.5.1 The Concept of Geomentality	12
	2.5.1.1The background to main stages of Geomentality	13
2.6	Intimate bond of Maori people to Maori Land	17
2.7	Conclusion	19

4.8	Findings of the Study	53
4.9	Conclusion	54
	CHAPTER 05 -CONCLUSION	55
	REFERENCE LIST	58

LIST OF FIGURES

Figure 2.1	The mirror effect of water and the vibrancy effect of moving water	12
Figure 2.2	The ideal shapes of the Mountain type	14
Figure 2.3	The Relationships among World view, Mental map, Environmental perception, Geomentality and Mentality formed by Geomentality to waterfront living	17
Figure 3.1	Conceptual Framework	23
Figure 3.2	Location Map of the Study Area-Bolgoda lake Waterfront	24
Figure 3.3	Research Design	25
Figure 4.1	Waterfront Developments around Diyawanna Lake	30
Figure 4.2	Land Use pattern in the Study Area	32
Figure 4.3	Existing Access Roads	33
Figure 4.4	Changing of Build form	33
Figure 4.5	Conversion of Area	35
Figure 4.6	Encroachments and Unauthorized Land Fillings	36
Figure 4.7	Three Type of Clusters	45
Figure 4.8	Desire to live in Bolgoda waterfront	50
Figure 4.9	Desire to Resale the Property	51
Figure 4.10	Desire to Rent out or Change of Use	51
Figure 4.11	Waterfront Homes in Bolgoda Area	53

LIST OF TABLES

Table 2.1	Selected Studies on Demand for Waterfront Developments	10
Table 4.1	Ongoing and Future Waterfront Development Projects in City Of Colombo	28
Table 4.2	Unit Values according to the View	29
Table 4.3	Character of Kesbawa Urban Area and Bolgoda River at Different period of time	31
Table 4.4	Changing of Land Ownership, Build form and Social group	38
Table 4.5	Demographic data from the on-site interview	39
Table 4.6	Responses related to the Demand for waterfront Properties	41
Table 4.6.1	Ranking of Responses according to its Values	42
Table 4.6.2	Clustering of different Responses based on its characteristics	43
Table 4.6.3	Three Clusters and its Attributes	44
Table 4.7	Comparison of the Demand attributes with Geomentality characteristics	46
Table 4.8	Income Levels	48
Table 4.8.1	Relationship between Income Levels and Demand Attributes	48
Table 4.9	Variables Used to Investigate the Geomentality of the Respondents	49