## **TABLE OF CONTENTS**

CHAPI	ER 1 : INTRODUCTION	1
1.0	Introduction	1
1.1	Waste Management Issues and Trends	4
1.2	Future Directions	9
1.3	Integrated Solid Waste Management (ISWM)	g
1.4	Objectives	13
CHAPT	ER 2 : LITERATURE REVIEW	14
2.0	Introduction	14
2.1	Overview of Malaysian Legal Framework in ISWM	15
2.1.1	Federal Constitution 1957	15
2.1.2	Local Government Act 1976	17
2.1.3	Town and Country Planning Act 1976	18
2.1.4	Environmental Quality Act 1974	20
2.1.5	Streets, Drainage and Building Act 1974	22
2.1.6	Implication of Legal Framework on the Implementation of ISWM	22
22	Overview of Institutional Framework in ISWM	25
2.2.1	Federal Agencies	27
2.2.2	State Agencies	33
2.2.3	Local Authorities (LA)	37
2.2.4	Private Sector	38
2.2.5	Implication of Institutional Framework on the Implementation of ISW	/M.43
2.3	Key Considerations in the Legal and Institution Framework	45
2.3.1	Action Plan for A Beautiful and Clean Malaysia (ABC, 1988)	45
2.3.2	Proposed Solid Waste Act	53
2.4	Summation of the Legal and Institutional Framework	57

2.5	International Trends	60
2.5.1	European Union (EU)	60
2.5.2	United Kingdom (UK)	65
2.5.3	United States of America (USA)	69
2.5.4	Sweden	73
2.5.5	Spain	75
2.5.6	Israel	77
2.5.7	China	80
2.6	Summary of Key Lesson Learned from International Trends	82
CHAPT	ER 3 : METHODOLOGY	88
3.0	Introduction	88
3.1	Policy Formulation	88
CHAPT	ER 4 : DISCUSSIONS	91
4.0	Introduction	91
4.1	Existing Practices in Solid Waste Management	91
4.1.1	Solid Waste Generation & Composition	92
4.1.2	Solid Waste Handling at Source	96
4.1.3	Solid Waste Collection & Transportation	99
4.1.4	Solid Waste Treatment & Resource Recovery	101
4.1.5	Solid Waste Disposal	106
4.2	Issues & Trends of Solid Waste Management in Malaysia	108
4.2.1	Issues and Trends in Solid Waste Generation & Composition	109
4.2.2	Issues and Trends in Solid Waste Handling at Source	112
4.2.3	Issues and Trends in Solid Waste Collection and Transportation.	113
4.2.4	Issues and Trends in Solid Waste Treatment and Resource Reco	
425	Issues and Trends in Solid Waste Disposal	

4.3	Derived Key Issues of Solid Waste Management in Malaysia
4.3.1	Strategic Planning & Legislative Reforms in Solid Waste Management125
4.3.2	Integrative aspects in Solid Waste Management
4.3.3	Economic Factor in Solid Waste Management
4.3.4	Stakeholder Attitude & Awareness in Solid Waste Management 128
4.3.5	Research Needs in Solid Waste Management
CHAPT	ER 5 : POLICY FORMULATION130
5.0	Introduction
5.1	Policy Instruments
5.2	Integration in Policy Instruments
5.3	Criteria for Policy Selection
5.4	Policy Needs
5.5	Policy Options
5.6	Policy Selection and Description
5.7	Policy Recommendation - Introduction
5.8	Policy Recommendation 1 : National ISWM Strategy 149
5.8.1 Mana	AP 1 (Action Plan 1) : Formation of Department of Solid Waste gement (DSWM)
5.8.2	AP 2 : Formation of Strategic Committee on Solid Waste Management151
5.8.3	AP 3 : Implementation of ISO14000 by Consumer Product Firms 152
5.9	Policy Recommendation 2 : Legislative Developments
5.9.1	AP 1 : Mandatory Requirement for Waste Source Separation
5.9.2	AP 2 : Definition and Management of Household Hazardous Waste 154
5.9.3	AP 3 : Identification and Remediation of Contaminated Land 155
5.10	Policy Recommendation 3 : Integration Considerations
5 10 1	AP 1 : Integration in Solid Waste Management Plans 156

F 40 0	ADO I-t
5.10.2	AP 2 : Integration in Implementing Policy Instrument on Stakeholders
5.10.3	AP 2 : Integration of National Strategy with Other Government Polices
5.11	Policy Recommendation 4 : Economic Instruments
5.11.1	AP 1 : Provision of Incentives to Stakeholders in the National Budget
5.11.2	AP 2 : Imposition of Taxation to Stakeholders in the National Budget161
5.12	Policy Recommendation 5 : Market Development for Waste Products 162
5.12.1	AP 1 : Government Purchasing Policy
5.12.2	AP 2 : Minimal Recycled Content in Newspaper 163
5.12.3	AP 3 : Encouraging Private Ventures in the Recycling Market 163
5.13	Policy Recommendation 6 : Communicating Information
5.13.1	AP 1 : Raising Public Awareness
5.13.2	AP 2 : Publication of Solid Waste Information Yearly 166
5.13.3	AP 3 : DSWM to Function as a Solid Waste Exchange Facilitator 166
5.14	Policy Recommendation 7 : Research & Development in Solid Waste 167
5.14.1	AP 1 : Research on Basic Solid Waste Data 168
5.14.2	AP 2 : Research on Improving Efficiency and Effectiveness 168
5.14.3	AP 3 : Research on Increasing Application for Recovered Materials 169
CHAPT	ER 6 : CONCLUSIONS
6.1	Summary of Main Findings
6.2	Implications of Findings & Policy Recommendations
6.3	Limitations of this Study
6.4	Recommendations for Further Research
7.0	REFERENCES
ADDENI	NY A - ELI MEMDED STATES