

TABLE OF CONTENTS

<i>Chapter 1.</i>	EVALUATING THE SOCIO-ECONOMIC IMPACTS OF CLIMATE CHANGE: AN INTRODUCTION	
	by David Pearce	9
	OVERVIEW OF PRESENT SITUATION	10
	Global Warming Scenarios	10
	Regional Shares of Emissions	11
	Impacts	11
	Policy Options	13
	Choosing a Policy Mix	14
	TWO APPROACHES TO SETTING EMISSION TARGETS: "COST-BENEFIT" VERSUS "MINIMUM SURPRISE"	14
	TREATING UNCERTAINTY	16
	Uncertainty About Trace Gas Emissions	17
	Uncertainty About Climate Response	17
	Uncertainty About Regional Impacts	17
	Threshold Uncertainty	18
	Uncertainty About Social Response	18
	CONCLUSIONS: TOWARDS A GLOBAL CLIMATE POLICY	18
<i>Chapter 2.</i>	METHODOLOGICAL GUIDELINES FOR ASSESSING THE SOCIO-ECONOMIC IMPACTS OF CLIMATE CHANGE ON AGRICULTURE	
	by Steven Sonka	21
	INTRODUCTION	21
	OBJECTIVES	22
	PERSPECTIVE	22
	A Simplified Impacts Model	22
	Who are the Decision-makers?	24
	Key Issues Facing Decision-makers	26
	PREVIOUS APPROACHES TO AIACC	27
	Climatic Factors and Modelling Considerations	31
	Effects Measured	33
	ELEMENTS OF A DESIRED METHODOLOGY	34
	Deficiencies of Current Methodology	34
	Future Directions	35

GUIDELINES FOR A MORE ROBUST METHODOLOGY	37
Using Environmental Scenarios	37
The Role of 'Small' Models	39
SUMMARY AND RECOMMENDATIONS	39
REFERENCES	41

Chapter 3. MODELLING THE ECONOMIC IMPACTS OF GLOBAL CLIMATE CHANGE FOR AGRICULTURE AND TRADE 45
by S.R. Johnson

INTRODUCTION	45
SPECIFIC MODELLING ISSUES	46
Consumption Systems	47
Production Systems	48
ALTERNATIVE ECONOMIC MODELS	52
Individual Decision Models	53
Multi-market Models	54
Sector Performance Models	55
National and Multinational Models	55
Financial and Macro Performance Models	56
Government	56
ASSESSMENT OF GLOBAL CLIMATE CHANGE	57
CARD/FAPRI Multi-market Commodity Modelling System	57
Ministerial Trade Mandate Model (MTMM)	59
Basic Linked System (BLS)	60
Comparisons for the Design of Systems	61
Supporting Models	63
Key Issues	63
INTEGRATING AVAILABLE MODELS	64
Aggregate Suites	64
Micro Suites	65
Country Suites	65
CONCLUDING OBSERVATIONS	66
REFERENCES	68

Chapter 4. IMPACTS OF SEA LEVEL RISE: AN ECONOMIC APPROACH 73
by H.M.A. Jansen, O.J. Kuik and C.K. Spiegel

INTRODUCTION	73
LITERATURE REVIEW	74
Physical Scenarios	74
Economic Impacts	78
Modelling the Economic Impacts	82
Summary	89
CONCEPTUAL FRAMEWORK FOR ECONOMIC ASSESSMENT OF IMPACTS	89
Dynamic SLR Scenario	91
Identification of Primary Impacts	92
Adaptive Behaviour/Identification of Secondary Impacts	92

Quantification of Impacts	95
Monetary/Non-monetary Impacts	95
Physical Norms, Risk Limits	96
Valuation	96
Economic Assessment	96
Policy Measures	97
COMPARISON OF POLICY ALTERNATIVES	97
Uncertainty	97
Flexibility of Policies	99
Intertemporal Comparison	99
Risk	100
VALUING IMPACTS	101
Non-monetary Quantitative Valuation	102
Monetary Valuation	102
CONCLUSIONS AND RECOMMENDATIONS	104
Conclusions	104
Recommendations	105
REFERENCES	106