

Green Accounting in Europe

A Comparative Study, Volume 2

Edited by

Anil Markandya

*Fondazione Eni Enrico Mattel (FEEM), Milan, Italy and
Professor of Economics, University of Bath, UK*

Marialuisa Tamborra

*European Commission, Directorate General Research,
Brussels, Belgium*

THE FONDAZIONE ENI ENRICO MATTEI (FEEM) SERIES ON
ECONOMICS AND THE ENVIRONMENT

Edward Elgar

Cheltenham, UK • Northampton, MA, USA

Contents

<i>List of contributors</i>	-	•	vii
<i>Preface</i>	^x		xi

PART I DEVELOPMENTS IN METHODOLOGY

1. Introduction and project objectives	3
<i>Anil Markandya and Marialuisa Tamborra</i>	
2. Developments in green accounting	15
<i>Anil Markandya, Alistair Hunt and Ian Milborrow</i>	
3. Developments in pathway analysis	34
<i>Paul Watkiss, Mike Holland and Katie King</i>	
4. Updates to exposure-response functions	41
<i>Fintan Hurley, David Howard, Paul Watkiss and Mike Holland</i>	
5. Developments in valuation	65
<i>Anil Markandya, Alistair Hunt, Paul Watkiss and Fintan Hurley</i>	
6. The methodology for the estimation of impacts and damage costs caused by ambient air pollution	87
<i>Bert Droste-Franke, Wolfram Krewitt, Rainer Friedrich and Alfred Trukenmuller</i>	
7. Defensive expenditures	93
<i>Marialuisa Tamborra, Marcella Pavan, Anil Markandya and Alistair Hunt</i>	

PART II RESULTS

8. Estimates of damage costs from air pollution to human health, crops and materials	113
<i>Bert Droste-Franke, Wolfram Krewitt, Rainer Friedrich, Alfred Trukenmuller, Marialuisa Tamborra, Gianluca Crapanzano, Marcella Pavan, Paul Watkiss, Mike Holland, Katie King, Anil Markandya, Ian Milborrow, Alistair Hunt,</i>	

	<i>Onno Kuik, Kees Dorland, Frank A. Spaninks and John F. M. Helming</i>	
9.	Attribution of air damages to countries and economic sectors of origin <i>Bert Droste-Franke, Wolfram Krewitt, Rainer Friedrich and Alfred Trukenmuller</i>	226
10.	Developments in estimation of damages to crops <i>Onno Kuik, Kees Dorland, Frank A. Spaninks and John F. M. Helming</i>	293
11.	Forest and ecosystem damages <i>Ursula Triebswetter and Marialuisa Tamborra</i>	319
12.	Valuation of water <i>Gianluca Crapanzano, Marcella Pavan and Alistair Hunt</i>	363
13.	Damages to land <i>Paul Watkiss, Mike Holland, Katie King and Alistair Hunt</i>	381
14.	Marginal cost estimates of greenhouse gas emissions <i>Richard S.J. Tol, Samuel Fankhauser, Onno Kuik and Joel B. Smith</i>	411
15.	Environmental expenditures <i>Marialuisa Tamborra and Marcella Pavan</i>	429
PART III CONCLUSIONS AND POLICY RECOMMENDATIONS		
16.	Conclusions and policy recommendations <i>Anil Markandya and Marialuisa Tamborra</i>	473
	<i>Index</i>	503