

## TABLE OF CONTENTS

### PART I: POLICY INTEGRATION AND INSTITUTIONAL CHARACTERISTICS

	<u>Page</u>
Chapter I: THE PROBLEM AND THE GUIDELINES .....	9
The Problem of Integration .....	9
Guidelines for Integration .....	12
Chapter II: THE CASE STUDIES .....	27
Introduction .....	27
Administrative Jurisdiction, Structures and Powers .....	29
Administrative Flexibility and Discretion .....	35
Resources .....	37
The Planning Process .....	40
Public Accountability and Involvement, and Agency Reputation .....	45
Instruments, "Trigger" Factors, and Costs and Benefits of Integration .....	46
Annex A: Administrative/Institutional Characteristics Used in the Case Studies .....	59

### PART II: IMPROVED WATER DEMAND MANAGEMENT

Chapter III: FORECASTING AND PRINCIPLES OF DEMAND MANAGEMENT .....	63
Introduction .....	63
Demand Forecasting .....	65
Principles of Demand Management .....	68
Chapter IV: MANAGEMENT BY SECTOR .....	71
The Public Water Supply and Sewerage .....	71
Direct Abstractions and Direct Discharges .....	76

Agricultural Use of Water Services .....	84
Price of Irrigation Water .....	85
Transferable Water Rights .....	89
Conclusion .....	91
Annex A: The Calculation of Marginal Cost .....	92
Annex B: Cost-Benefit Analysis of Demand Management Measures .....	96

### PART III: PROTECTION OF GROUNDWATER RESOURCES

Chapter V: THE POLICY CONSIDERATIONS .....	101
Background and Management Objectives .....	101
Comprehensive Management .....	103
Managing Groundwater Use .....	103
Prevention and Clean-up .....	105
Dealing with Diffuse Sources of Pollution .....	107
Dealing with Uncertainties .....	109
Improving Integration Between Groundwater and Other Sectors .....	110
Appropriate Balance Between Central and Local Roles .....	112
Deciding Research Priorities .....	114
Chapter VI: GROUNDWATER ISSUES IN OECD COUNTRIES .....	117
Background .....	117
Principal Sources of Groundwater Pollution and their Effects .....	119
Coping with Existing Problems .....	133
The Institutional Framework for Groundwater Protection .....	139
Management Instruments Available .....	149
Institutional and Management Problems .....	166

### PART IV: COUNCIL RECOMMENDATION ON WATER RESOURCE MANAGEMENT POLICIES: INTEGRATION, DEMAND MANAGEMENT, AND GROUNDWATER PROTECTION

Chapter VII: COUNCIL RECOMMENDATION ON WATER RESOURCE MANAGEMENT POLICIES: INTEGRATION, DEMAND MANAGEMENT, AND GROUNDWATER PROTECTION .....	181
Appendix to the Recommendation .....	184
Part I: Institutional Arrangements .....	185
Part II: Water Demand Management .....	191
Part III: Protection of Groundwater Resources .....	194
BIBLIOGRAPHY .....	199