

# Managing Wetlands

An Ecological Economics Approach

---

*Edited by*

**R. Kerry Turner**

*Director, Centre for Social and Economic Research on the Global Environment (CSERGE) and Professor of Environmental Sciences, School of Environmental Sciences, University of East Anglia, UK*

**Jeroen C.J.M. van den Bergh**

*Professor of Environmental Economics, Department of Spatial Economics and Professor of Water, Nature and Space, Institute for Environmental Studies, Free University, Amsterdam, The Netherlands*

**Roy Brouwer**

*Environmental Economist, RIZA, National Water Policy Division, The Netherlands and Associate Research Fellow, Centre for Social and Economic Research on the Global Environment (CSERGE), University of East Anglia, UK*

**Edward Elgar**

Cheltenham, UK • Northampton, MA, USA

# Contents

---

<i>List of figures</i>	vii
<i>List of tables and boxes</i>	ix
<i>List of contributors</i>	xi
<i>Acknowledgements</i>	xiii
1 Introduction	1
<i>R.K. Turner, J.C.J.M. van den Bergh and R. Brouwer</i>	
<b>PART I METHODOLOGICAL ISSUES AND WETLAND ECOSYSTEM MANAGEMENT</b>	
2 Integrated assessment as a decision support tool	19
<i>R. Brouwer, R.K. Turner, S. Georgiou and J.C.J.M. van den Bergh</i>	
3 Environmental indicators and sustainable wetland management	41
<i>R. Brouwer, S. Crooks and R.K. Turner</i>	
4 The economics of wetland management	73
<i>R.K. Turner, R. Brouwer, T.C. Crowards and S. Georgiou</i>	
5 A meta-analysis of wetland ecosystem valuation studies	108
<i>R. Brouwer, I.H. Langford, I.J. Bateman and R.K. Turner</i>	
6 Social and deliberative approaches to support wetland management	130
<i>R. Brouwer, R.K. Turner, S. Georgiou, N. Powe, I.J. Bateman and I.H. Langford</i>	
<b>PART II CASE STUDIES OF ECOLOGICAL-ECONOMIC APPROACHES TO WETLAND ECOSYSTEM MANAGEMENT</b>	
7 Environmental and economic assessment of the location of wetland buffers in the landscape for nutrient removal from agricultural runoff	165
<i>M. Blackwell and E. Maltby</i>	
8 Ecological and socio-economic evaluation of wetland conservation scenarios	198
<i>M.S. Skourtos, A.Y. Troumbis, A. Kontogianni, I.H. Langford, I.J. Bateman and S. Georgiou</i>	

9	Wetland creation: socio-economic and institutional conditions for collective action <i>T. Söderqvist and T. Lindahl</i>	223
10	Management of a multi-purpose, open access wetland: the Norfolk and Suffolk Broads, UK <i>R.K. Turner, R. Brouwer, S. Georgiou, I.J. Bateman, I.H. Langford, M. Green and H. Voisey</i>	250
11	Spatial hydro-ecological and economic modelling of land use changes in wetlands <i>J.C.J.M. van den Bergh, A. Barendregt, A. Gilbert, M. van Herwijnen, P. van Horssen, P. Kandelaars and C. Lorenz</i>	271
12	Conclusions <i>R.K. Turner, J.C.J.M. van den Bergh and R. Brouwer</i>	301
	<i>Index</i>	309