Contents

List of figures and tables vii
List of contributors ix
List of abbreviations xiv
Preface xvi

PART I AN OUTLINE OF THE SOCIAL SCIENCE POTENTIAL

1. Introducing the social embeddedness of industrial ecology 3
   Frank Boons and Jennifer Howard-Grenville
2. Ecology in the social sciences: an overview 28
   Frank Boons
3. Don't fence me in . . . 48
   Henrikke Baumann

First intermezzo  Out into the open: the promise of dialogue 65
   Frank Boons

PART II REGIONAL APPROACHES

4. Eco-industrial parks and industrial ecology: strategic niche or mainstream development? 73
   David Gibbs
5. Facilitating regional industrial symbiosis: network growth in the UK's national industrial symbiosis programme 103
   Raymond Paquin and Jennifer Howard-Grenville
6. The social embeddedness of industrial symbiosis linkages in Puerto Rican industrial regions 128
   Marian R. Chertow and Weslynne S. Ashton

Second intermezzo  A transdisciplinary perspective on industrial ecology research 152
   Cynthia Mitchell
Third intermezzo  Regional eco-industrial development: views from different stakeholders  
Anthony Chiu

PART III  PRODUCT CHAIN APPROACHES

7. Transgenic crops in Brazil: scientific decision-making for social ambiguities?  
Jeremy Hall and Stelvió Matos

8. Commodities, their life-cycle and industrial ecology  
Timothy M. Koponen

9. Sustainable supply chain management  
Stefan Seuring, Romy Morana and Yan Liu

Fourth intermezzo  Product chain management and social sciences: path dependency, cultural validity and short- and long-term feedback loops  
Claudia R. Binder

Fifth intermezzo  The exchange of ideas between social science and engineering approaches to product chain industrial ecology  
Bart van Hoof

PART IV  THE SOCIAL SCIENCE CONTRIBUTION RECONSIDERED

10. A critical view on the social science contribution to industrial ecology  
John Ehrenfeld

11. The social embeddedness of industrial ecology: exploring the dynamics of industrial ecosystems  
Jennifer Howard-Grenville and Frank Boons

Index