
Contents

Preface	vii
Introduction	ix
Chapter 1. Building Region-based Sustainable Development: Vocabulary and Tools.	1
1.1. Circular economy	2
1.1.1. The circular economy according to the MacArthur Foundation	2
1.1.2. Experiments in circular economy	5
1.1.3. Factual and scientific origins of circular economy	14
1.2. Industrial ecology	21
1.2.1. Industrial ecology and sustainable development.	21
1.2.2. Industrial metabolism and symbiosis	25
1.2.3. Experiments in industrial ecology	28
1.3. Short supply chains	38
1.3.1. Origins of short food supply chains: criticism of industrial “long” supply chains	39
1.3.2. Forms and functioning of short food supply chains.	44
1.3.3. Short supply chains: generators of social innovation	49
1.4. Industrial ecology, short supply chains and sustainable regional development.	51
1.4.1. Links among these different concepts: the creation of sustainable territories	51
1.4.2. Proximity and innovative “milieu”: key ingredients for sustainable regional development	55
1.4.3. An assessment of the regional impacts of industrial ecology and short supply chains.	59

Chapter 2. Difficulties, Barriers and Stakes in Transitioning Towards Sustainable Regions	65
2.1. Barriers to the implementation of industrial ecology and short supply chains	66
2.1.1. The case of industrial ecology	66
2.1.2. The case of short food supply chains	72
2.2. How to overcome or reduce these obstacles: the role of service activities.	84
2.2.1. Definition of service activities	84
2.2.2. What role do service activities have in the implementation of industrial ecology and short food supply chains?	86
2.3. Challenges for public policy	92
2.3.1. The issue of governance	92
2.3.2. The issue of coordination	96
2.3.3. What is the relevant territorial scale?	99
Conclusion	103
Bibliography	107
Index	121