

## Contents

Editors	xi
Contributors	xiii
Preface	xxv
Foreword	xxvii
Session I. Introduction	
1. Landscape ecological applications in man-influenced areas linking man and nature systems -Editorial introduction S.-K. Hong, N. Nakagoshi, B.J. Fu, Y. Morimoto	1
<b>Session II. Landscape Analysis and Evaluation Method</b>	
<b>Part 1. Baseline concept</b>	
2. Spatial pattern analysis as a focus of landscape ecology to support evaluation of human impact on landscapes and diversity K.J. Koffi, V. Deblauwe, S. Sibomana, D.F.R. Neuba, D. Champluvier, C. De Canniere, N. Barbier, D. Traore, B. Habonimana, E. Robbrecht, J. Lejoly, J. Bogaert	7
3. Application of landscape ecology in long term ecological research - Case study in China B.J. Fu, D. Niu, G.R. Yu, L.D. Chen, K.M. Ma, Y. Luo, Y.H. Lu, W.W. Zhao	33
4. Ecological networks, from concept to implementation R.H.G. Jongman	57
<b>Part 2. Applications in evaluation</b>	
5. Landscape changes in Japan based on national grid maps N. Nakagoshi, J.-E. Kim	71

- |  |     |
|--|-----|
| 6. Challenges faced when creating an evaluation method of biodiversity on an ecosystem level                                   | 81  |
| J. Morimoto  |     |
| 7. Identification of the potential habitat for giant panda in the Wolong Nature Reserve by using landscape ecology methodology | 95  |
| L.D. Chen, X.H. Liu, B.J. Fu, Y.H. Lil, J. Qiu   |     |
| 8. Land use change from traditional to modern eras: Saitama Prefecture, Japan  | 113 |
| R. Seguchi, R.D. Brown, K. Takeuchi  |     |
| 9. Evaluation and planning of wildlife habitat in urban landscape  | 129 |
| Y. Natuhara  |     |

### **Session III. Landscape Management**

#### **Part 3. Applications in managing diversity**

- |   |     |
|---|-----|
| 10. Landscape ecology for biodiversity - Scaling up   | 149 |
| T.H. Ro, S.-K. Hong   |     |
| 11. A higher-taxon approach with soil invertebrates to assessing habitat diversity in East Asian rural landscapes                                       | 163 |
| S.-I. Tanabe, S.K. Kholin, Y.-B. Cho, S.-I. Hiramatsu, A. Ohwaki, S. Koji, A. Higuchi, S.Y. Storozhenko, S. Nishihara, K. Esaki, K. Kimura, K. Nakamura |     |
| 12. Landscape ecological approach in oil palm land use planning and management for forest conservation in Malaysia                                      | 179 |
| S.A. Abdullah, N. Nakagoshi   |     |
| 13. Managing biodiversity of rice paddy culture in urban landscape - Case research in Seoul City  | 193 |
| I.-J. Song, Y.-R. Gin   |     |

#### **Part 4. Applications in landscape health**

- |  |     |
|--|-----|
| 14. Landscape restoration - A case practice of Kushiro Mire, Hokkaido  | 209 |
| F. Nakamura, Y.S. Ahn  |     |
| 15. Non-indigenous plant species in Central European forest ecosystems | 235 |
| S. Zerbe   |     |

16. Traffic mortality, analysis and mitigation - Effects of road, traffic, vehicle and species characteristics	253
F. van Langevelde, C. van Dooremalen, C.F. Jaarsma	
17. Element fluxes and budgets of a plantation embedded in an agroforestry landscape: Implication for landscape management and sustainability	273
W. Shen, H. Ren, Y. Lin, M. Li	
18. The effects of the regulation system on the structure and dynamics of green space in an urban landscape - The case of Kitakyushu City	291
T. Manabe, K. Ito, D. Isono, T. Umeno	
19. Seeding on slopes in Japan for nature restoration	311
H. Yoshida	
20. Wetlands and riparian buffer zones in landscape functioning	329
Ü. Mander, K. Kimmnel	
21. Post-fire forest restoration indicated by canopy density in the northern great Hing'an mountains	359
F.-J. Xie, X.-Z. Li, X.-G. Wang, D.-N. Xiao	

#### **Session IV. Designing for Landscape Creation**

##### **Part 5. Applications in land planning and strategy**

22. Kyoto as a garden city - A landscape ecological perception of Japanese garden design	375
Y. Morimoto	
23. Bee-Bo forest: Traditional landscape ecological forest in Korea	389
K.-S. Lee	
24. Cultural patterns as a component of environmental planning and design	395
R.D. Brown, R. Laforteza, R.C. Corry, D.B. Leal, G. Sanesi	
25. Comparison of scenarios for the Vistula river, Poland	417
T. Van der Sluis, J. Romanowski, J. Matuszkiewicz, I. Bouwma	
26. Trends and future researches in green space design - Toward practical planning	435
K. Nagashima	
27. Beijing urban spatial distribution and resulting impacts on heat islands	459
Z. Ouyang, R. Xiao, E.W. Schienke, W.F. Li, X. Wang, H. Miao, H. Zheng	
28. Connectivity analyses of avifauna in urban areas	479
H. Hashimoto	

29. International trends of rural landscape researches for land management and policies	489
J.-E. Kim, S.-K. Hong, N. Nakagoshi	
<b>Session V. Conclusion</b>	
30. Linking man and nature landscape systems - Landscaping blue-green network	505
S.-K. Hong	
<b>Index</b>	525