Figures

1.1 Socioecological systems as the overlap of a natural and a cultural sphere of causation 13
1.2 Biophysical dimensions of social systems 17
1.3 Biophysical structures of society 18
1.4 The role of the book chapters in exemplifying relevant distinctions 22
2.1 Basic indicators for Austria’s development from 1830 to 2000 35
2.2 Domestic energy consumption of Austria, 1830–2000 36
2.3 Austria’s energy imports and exports, 1920–2000 39
2.4 Useful energy analysis of Austria, 1830 and 1995 41
2.5 Yields of important crops in Austria, 1830–1995 (index, 1830 = 1) 47
3.1 Global carbon emissions related to land use and fossil fuel use, 1850–2000 62
3.2 The carbon content of Austria’s yearly CO₂ emissions from fossil fuel use and cement production, 1840–2000 66
3.3 Aboveground standing crop of Austria’s terrestrial vegetation, 1880–1994 68
3.4 A ‘best guess’ estimate of the changes in aboveground standing crop, belowground standing crop and soil organic carbon in Austria, 1880–1995 69
3.5 Changes in the area of different types of grassland in Austria, 1880–1995 70
3.6 Estimate of the aggregate yearly carbon uptake of Austria’s vegetation, 1880–1994 71
3.7 An approximation of Austria’s net carbon emissions, 1860–2000 74
4.1 Land use in the United Kingdom, 1800 to 2000 88
4.2 Arable land in England and Wales, 1800 to 2000 88
4.3 Animal traction (horses and oxen) in the agriculture of the United Kingdom, 1800 to 2000 90
4.4 Crop yields of main cereals in England and Wales, 1700 to 2000 93
4.5 Per capita coal consumption in the United Kingdom’s industry and households, 1700 to 2000 95
4.6 Primary energy use in the United Kingdom, 1700 to 2000 96
List of figures

4.7 Energy use in the United Kingdom by energy carriers, 1700 to 2000 97
4.8 Physical work supplied by labourers and coal in the United Kingdom’s industry sector, 1841 to 2001 100
4.9 Iron production in the United Kingdom, 1700 to 2000 105
5.1 Main components of energy flow analyses for Austria, Vienna, the lowland and the upland systems 123
5.2 International and domestic transport required for Austria’s biomass supply, 1926–2000 129
5.3 Yearly nitrogen flows in the lowland system in 1830 and 1995 132
6.1 Various measures of efficiency of land and labour use for the three communities 155
7.1 Domestic extraction per capita 189
7.2 Domestic extraction per land area 189
7.3 Share of biomass, fossil fuels, minerals and products in domestic material consumption 191
7.4 Domestic material consumption per capita 192
7.5 Domestic material consumption per capita per area 193
7.6 Physical trade balance per capita per year, by material category 194
7.7 Unit prices of imports and exports 196
7.8 Trade intensities: imports/DMC and exports/DE 198
8.1 Cereal yields and urbanization in the United Kingdom and Austria 234
8.2 Two historical transitions compared: the United Kingdom and Austria 236