

# WORLD RESOURCES

2000-2001

## People and Ecosystems

### The Fraying Web of Life

UNITED NATIONS DEVELOPMENT PROGRAMME

UNITED NATIONS ENVIRONMENT PROGRAMME

WORLD BANK

WORLD RESOURCES INSTITUTE

2000



ELSEVIER  
SCIENCE

Amsterdam • Lausanne • New York • Oxford • Shannon • Singapore • Tokyo

<b>FOREWORD</b>	vii
<b>CHAPTER 1 LINKING PEOPLE AND ECOSYSTEMS</b>	<b>3</b>
How Viable Are Earth's Ecosystems?	5
Losing the Link?	5
Adopting a Human Perspective	10
Sources of Wealth and Well-Being	11
Direct and Indirect Benefits	11
Managing Ecosystems: Trade-Offs and Costs	16
How Are Ecosystems Degraded?	16
What Drives Degradation?	22
Who Owns Ecosystems?	33
Managing for Ecosystem Health	40
<b>CHAPTER 2 TAKING STOCK OF ECOSYSTEMS</b>	<b>43</b>
A Unique Approach	44
A Global Synthesis of Current Information	44
The "Big Picture," but with Limitations	46
PAGE Findings: What Shape Are the World's Ecosystems In?	48
The Bottom Line	51
<b>AGROECOSYSTEMS</b>	<b>53</b>
Characterizing Ecosystems	56
Assessing Goods and Services	60
<b>COASTAL ECOSYSTEMS</b>	<b>69</b>
Extent and Modification	69
Assessing Goods and Services	79
<b>FOREST ECOSYSTEMS</b>	<b>87</b>
Extent and Modification	90
Assessing Goods and Services	93
<b>FRESHWATER SYSTEMS</b>	<b>103</b>
Extent and Modification	103
Assessing Goods and Services	107
<b>GRASSLANDS ECOSYSTEMS</b>	<b>119</b>
Extent and Modification	119
Assessing Goods and Services	125



<b>APPENDIX</b>	
<b>MOUNTAIN ECOSYSTEMS</b>	<b>133</b>
<b>POLAR ECOSYSTEMS</b>	<b>136</b>
<b>URBAN ECOSYSTEMS</b>	<b>141</b>
<b>CHAPTER 3 LIVING IN ECOSYSTEMS</b>	<b>147</b>
<b>AGROECOSYSTEMS</b>	
Regaining the High Ground: Reviving the Hillsides of Machakos, Kenya	149
Cuba's Agricultural Revolution: A Return to Oxen and Organics	159
<b>COASTAL ECOSYSTEMS</b>	
Replumbing the Everglades: Large-Scale Wetlands Restoration in South Florida	163
Managing Mankòtè Mangrove	176
Bolinao Rallies Around Its Reef	178
<b>FOREST ECOSYSTEMS</b>	
Up from the Roots: Regenerating Dhani Forest through Community Action	181
<b>FRESHWATER SYSTEMS</b>	
Working for Water, Working for Human Welfare in South Africa	193
Managing the Mekong River: Will a Regional Approach Work?	206
New York City's Watershed Protection Plan	210
<b>GRASSLAND ECOSYSTEMS</b>	
Sustaining the Steppe: The Future of Mongolia's Grasslands	212
<b>CHAPTER 4 ADOPTING AN ECOSYSTEM APPROACH</b>	<b>225</b>
What Should We Do to Adopt an Ecosystem Approach?	226
What Does the Future Hold?	236
A Millennium Ecosystem Assessment	238
What Better Time Than Now?	239
<b>DATA TABLES</b>	<b>240</b>
<b>SOURCES</b>	<b>358</b>