List of Figures

Published by

Kelly, Jason M.
Rivers of the Anthropocene.

For additional information about this book
https://muse.jhu.edu/book/63416
LIST OF FIGURES

1.1 Per capita levels of industrialization, 1750–1980  15
1.2 Per capita GDP based on Angus Madison's *Historical Statistics for the World Economy: 1–2003 CE*  16
2.1 The response of river systems to anthropogenic drivers  28
2.2 The cascade model of Haines-Young and Potschin (2010), emphasizing the transdisciplinary “gap” between science-based ecosystem assessment methodologies and the valuation of these ecosystems by society  31
2.3 The River Tyne and the River Dart, U.K  33
2.4 Downstream patterns in ecosystem service scores and total ecosystem service scores based on Google Earth assessment of ecosystem services from fluvial features  35
2.5 The terminology used in the riverine ecosystem synthesis of Thorp, Thoms, and Delong (2006, 2008) adapted to show the potential central role for transdisciplinary river science  38
2.6 Citizen-science via crowd-sourced data in action in the Haltwhistle Burn catchment  40
2.7 Issues and limitations of “traditional” river science  41
3.1 Annual carbon dioxide emissions (tonnes) per capita, 1990–2009  45
5.1 Theoretical ecosystem health and area wealth relationships during three stages of river use  65
5.2 A model of what influences human actions  68
5.3 Noteworthy conceptual markers along a spectrum ecosystem condition  69
6.1 Diagram illustrating the relationship between the main elements of the Fenland Holocene succession 77
6.2 Holme Post, Cambridgeshire, showing previous ground levels and J. A. Zalasiewicz standing beside Holme Post in 2008 78
6.3 Roddons visible in fields at Plash Drove, near Guyhirn, Cambridgeshire 80
6.4 LiDAR image of the roddons in the Boston-Fishtoft and coastal area in Lincolnshire 81
7.1 Main components of the Seine River basin and Paris urban growth, 1870s–2000s 86
7.2 Spatial distribution of maximum alterations of the Seine River hydrological network, presented by stream orders 1 to 7 streams 89
7.3 Schematic longitudinal profiles of the impacts of Paris megacity on the Seine River main course at various periods 90
7.4 Schematic representation of the circulation of material within a river basin at the Anthropocene and reconstruction of past contamination from floodplain sediments at the basin outlet 94
7.5 The impair-then-repair scheme and the five stages defining river quality trajectories, applied to river basins in North America and Western Europe 96
7.6 General scheme of the circulation of material within pristine basins and impacted basins at the Anthropocene 99
9.1 John Hilbert engraving, Medieval Bridge, Newcastle upon Tyne, ca. 1727 122
9.2 Engraving showing postflood ruin of the Tyne Bridge 124
9.3 “A Subscription of the Nobility Gentry Clergy and others.” 126
9.4 Historic parishes north of the Tyne 127
9.5 Historic parishes south of the Tyne 128
9.6 Categories of recipients of relief in the parishes of Ovingham and Heddon-on-the-Wall, Northumberland 130
9.7 Loss assessment for Mary Graham, widow, of Low Elswick, March 3, 1772 131
10.1 The co-designed infrastructure-architecture of Clarke Quay captures rain and keeps tourists dry 141
10.2 Layered Singapore River infrastructure providing offstage social interactional space 142
10.3 Streams of images, pedestrians, and water intertwine along the underpasses linking touristic neighborhoods along the Singapore River 143
10.4 Rendering the displaced lighters of the past for Metro riders: what was above, goes below; what were material transactions of everyday life become symbolic reminders 144
10.5a Looking downstream toward what was once the river’s mouth, the Marina Bay Hotel and Casino represents and produces Singapore’s moneymaking future 145
10.5b The Marine Bay Barrage regulates the island’s floods and the freshwater catchment system 145
10.6a The frontstage designed for elite guests of a luxury hotel on a flood-prone bend in Orchard Road. Fragments of sculptures by Botero and Anthony Poon 146
10.6b A section of the Stamford Canal provides a backstage social interactional space for upscale hotel and mall workers to take a break 146
11.1 City as Living Laboratory (CaLL) framework diagram 151
11.2 FLOW (Can You See the River?), diagram illustrating mirror’s reflection of red markers designating points of focus in the landscape 153
11.3 FLOW (Can You See the River?) 154
11.4 FLOW (Can You See the River?), Walkable map of the city of Indianapolis 155
11.5 Sample FLOW evaluation results 156
11.6 STREAM/ LINES (I/CaLL), diagram illustrating keywords for each of the six tributary sites off the White River and their interrelationship 158
11.7 STREAM/ LINES (I/CaLL), drawing by Mary Miss mapping the connections between the water system and the city of Indianapolis 159
11.8 Principles for connecting knowledge, perspectives, and artistic interventions with actions to promote sustainable development 160
11.9 STREAM/ LINES (I/CaLL) installation at Butler University 161
12.1 Map of North Branch, South Branch, and Main Stem of the Chicago River 164
12.2 Heading downstream on the North Branch canal, toward the city center 166
12.3 Wolf Point 167
12.4 Skyscraper canyon 169
12.5 The embanked Chicago River 171
12.6 Direction of flow of the Chicago River before after its reversal in 1900 173
12.7 Flow of water (and sewage) from the Chicago River through other river systems into the Gulf of Mexico 174