

Special Section: Global Environmental History

help for details on the environmental history of the 20th century can be found in J.R. McNeill, *Something New Under the Sun: An Environmental History of the Twentieth Century World* (New York: W.W. Norton, 2001).

11 Devra Davis, *When Smoke Ran Like Water: Tales of Environmental Deception and the Battle Against Pollution* (New York: Basic Books, 2002); Brett Walker, *Toxic Archipelago: A History of Industrial Disease in Japan* (Seattle: University of Washington Press, 2010).

12 Mike Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (New York: Verso, 2001)

13 Steven Solomon, *Water: The Epic Struggle for Wealth, Power, and Civilization*. (New York: Harper, 2010). For a U.S. example, there is the classic Marc Reisner, *Cadillac Desert: The American West and its Disappearing Water* (New York: Penguin Books, 1993). For an examination of more ancient practices there is Brian Fagan, *Elixir: A History of Water and Humankind* (New York: Bloomsbury Press, 2011)

14 Andrew Weart, *The Discovery of Global Warming* (Cambridge: Harvard University Press, 2003).

15 Mark Carey, *In the Shadow of Melting Glaciers: Climate Change and Andean Society* (New York: Oxford University Press, 2010).

Beginning in the Belly, Ending in the Atmosphere: An Approach to Teaching Global Environmental History

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As historian Donald Worster once remarked, “environmental history begins in the belly.”¹ Worster’s comment not only reflects the importance of food consumption as a multi-faceted relationship between humans and non-human nature, it also suggests the ambition of environmental historians to relate the personal to the global. To connect students with both meanings is among the goals of a course that I currently teach at Amherst College, “Global Environmental History of the Twentieth Century” (GEH). This introductory-level survey of global environmental history from 1900 to the present is a fourteen-week course, which focuses on Latin America, Sub-Saharan Africa, and China. The class meets for two eighty-minute periods per week. GEH blends a lecture format with in-class discussions about readings and assignments. Enrollment ranges from 60 to 75 undergraduates, and students receive credit in either the history department or the environmental studies program. The course is a prerequisite for students majoring in environmental studies.

When developing GEH, I had three aims in mind for my students. The first was to help them investigate the ways in which societies and cultures outside the U.S. and Europe have interacted with their environments over the past century. The second was to introduce them to comparative and transnational methods in world history. The third was to show them the practical uses of environmental history. In addition to studying the past, GEH participants explore how to use historical knowledge in the formulation of policy recommendations and grassroots initiatives for addressing contemporary environmental issues.

The GEH syllabus is a product of my own ecological fieldwork and historical research in China and Latin America. I began my graduate studies at Yale University in Chinese environmental history and ended up writing a doctoral dissertation on the long-term ecological and cultural connections between Chile and California. At one point, a colleague suggested that I was “the guy who studied places beginning with the letter C.” In retrospect, my various Pacific crossings were quite fortuitous; they illuminated many possibilities for developing comparative and transnational approaches to environmental history.²

I have incorporated these experiences into the four units of my semester-long course on global environmental history. GEH begins with Latin America, proceeds to Sub-Saharan Africa, and then moves to China. In the fourth unit of the semester, students compare topics and themes from the three regions. Many of the readings, films, and assignments focus on food production and consumption. The final course sessions revolve around “atmospheric” issues – such as climate change – that transcend regional, national, and continental boundaries. When choosing the three geographical zones for GEH, I wanted to focus on places that are underrepresented in U.S. media coverage and inadequately addressed in many environmental history curricula. I struggled with my decision to eliminate India, North Africa, and the Pacific World from the course agenda. In the end, I opted for a pragmatic approach. The areas we study in GEH are places where I have travelled widely, sites where I have conducted research, locations that I have studied extensively, or territories that are not covered by my other course offerings. The GEH format could easily be adapted to accommodate other nations or regions.

I have also designed the course to integrate the “spatial turn” that history has undergone. In recent decades, historians have begun to consider the social production of space as a crucial dimension of the human experience.³ Many aspects of GEH build upon these geographical insights. At the beginning of each class session, I show several maps that are relevant to the course topics for the day. Often, I remove all titles, legends, and keys before displaying the maps on my lecture screen. I spend the first five minutes of the period talking with students about what sort of arguments and narratives they can derive from the cartographic images in front of them. These conversations not only provide opportunities for “mental warm-up exercises” at the beginning of each class meeting but they also give me the chance to introduce the key topics and themes for the day’s lecture. Many of the maps are scanned from books but I also rely upon several websites and map blogs as sources for my images. Three of my favorite sites are:

- <http://bigthink.com/blogs/strange-maps>
- <http://www.radicalcartography.net/>
- <http://www.bigmapblog.com/>

In addition to acknowledging the importance of spatial analyses to the understanding of the past, historians have begun experimenting with an array of techniques to help students

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develop empathy with historical actors and to assist them in applying historical methods to everyday issues. Role-playing assignments offer one such option.⁴ I have adopted this approach with the GEH paper topics, which ask students to “become” an actor in a current scenario that requires the use of environmental-historical knowledge. I offer students three options for each assignment. The paper topics allow writers to accommodate a variety of viewpoints. Below are samples of such questions from each unit:

Latin America: You are an adviser to a candidate from the state of Chiapas (Mexico’s southernmost state) running for office in the next round of Mexican congressional elections. Your candidate has asked you to research the environmental and socio-economic implications of farm subsidies and price supports for the farmers in your state. Your candidate’s constituents are predominately small-scale corn farmers of Mayan descent. Please employ historical examples in making your argument about how best to assist these constituents. In your paper, you should make reference to the Green Revolution and its implications for Mexico’s environmental history.

Sub-Saharan Africa: The Government of Botswana’s Department of Wildlife and National Parks has hired you as a consultant. They have asked you to write a historical background paper to be used in the creation of a new Wildlife Management Area just north of the Central Kalahari Game Reserve. The department head wants to learn from the past experiences of other African territories and nations so that Botswana can avoid the pitfalls associated with previous strategies for national park development. You should take a strong position on a set of policies that will allow multiple uses (e.g. sustainable agriculture, local food-gathering practices, eco-tourism, etc.) of the areas under conservation.

China: You work as an environmental lawyer in Beijing. A group of transnational companies has recently proposed a new development of factories along a ten-kilometer stretch of the Pearl River, south of Guangzhou. The factory managers are requesting that the Chinese Government allow them to release a substantial monthly quota of untreated chemical effluence into the Pearl River. It is your job to inform the State Environmental Protection Commission (SEPC) about a sensible policy for balancing the imperatives of economic development with the needs of human health and environmental protection. Issues raised in *Where the Dragon Meets the Angry River* may provide resources for helping you think about this topic.

Final Exam: The final exam asks students to reflect upon and integrate various case studies from the four course units. I often ask open-ended questions that provide considerable creative latitude. One prompt that I frequently use is: “Humans have – since at least the beginning of recorded history – shaped, managed, and attempted to control large bodies of water. Using two examples from this course, discuss the repercussions of this hydraulic manipulation for social systems and ecosystems.”

Readings: When preparing for each new version of GEH, I revise the readings to keep the course material relevant and up-to-date. To this end, I have experimented with many different core texts for each unit.

For the first unit of GEH, which focuses on Latin America, I currently use John Soluri’s elegantly written *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras and the United States* (Austin: University of Texas Press, 2005). Beginning in the belly, Soluri takes a familiar grocery store item and examines its complex transnational environmental and labor histories. This is an excellent text for introducing students to commodity chain analysis and unequal exchanges in world history. Several years ago, I taught Oscar Olivera’s book, produced in collaboration with Tom Lewis, *¡Cochabamba!: Water War in Bolivia* (Cambridge, Mass.: South End Press, 2004). Written by one of the activists at the heart of Bolivia’s popular movement against water privatization, *¡Cochabamba!* introduces students to notions of the Commons, historical experiences of “enclosure,” and examples of successful resistance to the commodification of natural resources. It also offers a poignant contrast to Garrett Hardin’s “Tragedy of the Commons.”⁵ The third text that I have assigned for the Latin America unit is J. Timmons Roberts & Nikki Demetria Thanos’ book, *Trouble in Paradise: Globalization and Environmental Crises in Latin America* (New York: Routledge, 2003). A model work of “political ecology,” it explores the relations among colonialism, “democratic space,” and ecological change in Latin America’s recent past. Published over a decade ago, *Trouble in Paradise* has begun to feel dated. Even so, its chapters – especially chapter five on Amazonia – could easily be excerpted for use in specific units.⁶

For the second unit of the course, which covers Sub-Saharan Africa, I have taught two different books. I currently use Tamara Giles-Vernick’s *Cutting the Vines of the Past: Environmental Histories of the Central African Rain Forest* (Charlottesville: University Press of Virginia, 2002). Although Giles-Vernick’s central concept of *doli* – a rich tradition of environmental and historical knowledge practiced by the Mpiemu people in the Central Africa Republic – can be a struggle for the class to grasp, teaching *Cutting the Vines of the Past* is well worth the effort. My students generally appreciate the author’s persuasive demonstration of how misperceptions of local land-use practices led outsiders to impose conservation strategies and environmental policies that were destined to fail. I have also taught the Sub-Saharan Africa section with James C. McCann’s text, *Green Land, Brown Land, Black Land: An Environmental History of Africa, 1800-1990* (Portsmouth, NH: Heinemann, 1999). This book is useful for challenging the overarching narratives of decline that have characterized many well-known accounts of Africa’s land-use history. While the text is strong in many areas it has surprisingly little to say about pastoralism or disease ecology.

During the China unit, I now rely upon R. Edward Grumbine’s *Where the Dragon Meets the Angry River: Nature and Power in the People’s Republic of China* (Washington, D.C.: Island Press, 2010). Grumbine deftly balances a personal travelogue of his visit to the Nujiang (Angry River) in Yunnan Province with an informative analysis of China’s struggle

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between biodiversity protection and economic development. His book is useful for upending many of the basic assumptions that underpin North American approaches to wilderness conservation. Previously, I used Elizabeth C. Economy's text, *The River Runs Black: The Environmental Challenge to China's Future* (Ithaca, NY: Cornell University Press, 2004). Ten years on from its publication, Economy's book is somewhat dated. Chapters 4 through 6, which focus on the institutional causes of China's environmental problems, are by far the most useful sections and retain their relevance. These chapters could easily be excerpted and assigned separately from the remainder of the text.

For the "World" unit, I am currently teaching Alan Weisman's *The World Without Us* (New York: Thomas Dunne Books/St. Martin's Press, 2007). Weisman's book, modeled after what Germans call a *Gedankenexperiment* (thought experiment), contemplates the destruction of human civilization and the subsequent rewilding of the planet. Despite the fact that *New York Times* Sunday Book Review editor Jennifer Schuessler accused Weisman of "giving way to the rhetoric of eco-hellfire," students have been drawn to Weisman's imaginative use of environmental history when constructing various post-human landscapes.⁷ *The World Without Us* pairs exceptionally well with Dipesh Chakrabarty's essay, "The Climate of History: Four Theses," in part because Chakrabarty begins and ends his article with Weisman's premises.⁸

I have also tried organizing the final unit of GEH around Ramachandra Guha's *How Much Should a Person Consume? Environmentalism in India and the United States* (Berkeley: University of California Press, 2006). In this history of environmentalism in the U.S. and India, Guha compares North America's "wilderness thinking" style of conservationism with India's "agrarianism" approach to peasant-based land-use policies. Finding deficiencies in both models, Guha advocates a transcendent position – "social ecology" – an environmental ethic that "joins rather than separates the most dominant species on earth with the other species and habitats that we have to share the world with." (88) Students have commented that the book's chapters do not yield a whole that is greater than the sum of its parts; they have also remarked upon Guha's highly selective use of sources. In the future, I am likely to assign only the final chapter, which bears the same title as the book. A third, overarching text that has proved extremely useful is J.R. McNeill's *Something New Under the Sun: An Environmental History of the Twentieth-Century World* (New York: Norton, 2000). McNeill's book offers an accessible overview of major issues in twentieth-century global environmental history. Many students found *Something New Under the Sun* useful for putting paper topics into the broader context of world historical events.⁹

Films: In addition to using maps, books, articles, and an extensive array of lecture images, I show several films during the semester. In the Latin America unit, I often screen *The Power of Community: How Cuba Survived Peak Oil* (The Community Solution, 2006). This unapologetically polemical documentary offers a stimulating account of how Cuban sustainability activists have developed post-Peak Oil resilience strategies over the past three decades.¹⁰

Among the films that have been most successful in the Sub-Saharan Africa part of the course is *Darwin's Nightmare* (Image Entertainment, 2007). Stimulating discussions tend to arise from students' reactions to Austrian filmmaker Hubert Sauper's probing investigation of one of the planet's most infamous invasive species. Filmed entirely by hand-held camera, the documentary explores how the introduction of the Nile Perch (*Lates niloticus*) into Lake Victoria in the 1950s shaped the social history of the East African communities surrounding the continent's largest body of fresh water. Another food – in this case coffee – has also served the course well. *Black Gold* (Mongrel Media, 2006) has led many of my students towards a more complex understanding of their morning (and late-night) beverage. Filmmakers Marc and Nick Francis follow Tadesse Meskela, an Ethiopian coffee farmers' cooperative leader, as he travels the world in search of a better price for his growers' beans. Focusing on the birthplace of coffee, Ethiopia's Oromia Region, the film exposes the myriad connections among New York commodity traders, coffee consumers in Europe and the U.S., and the African farmers who sell their crop for a meager percentage of its traded value on international markets.

During the China unit, I now show *The Warriors of Qiugang: A Chinese Village Fights Back* (Yale e360, 2011). Filmmakers Ruby Yang and Thomas Lennon profile the activists of Quigang, a small town in Anhui Province, where a chemical company's contamination of local air and water became so egregious that local citizens began fighting back.¹¹ I have also used *Manufactured Landscapes* (Zeitgeist Films, 2007), a film that focuses on Ed Burtynsky's photography of unprecedented landscape transformations in China. The documentary begins with a slow pan of the assembly line in a one-kilometer-long factory that employs over 23,000 people and produces most of the world's clothing irons. We later see footage of those same irons, sent back to China to accumulate in the nation's colossal municipal dumps. While the section on the Three Gorges Dam is now outdated, the film retains its power to demonstrate the vast scope and scale of environmental change in the world's most populous country.

During the "World" unit, I turn to the transnational issue of climate change and screen *The Island President* (Samuel Goldwyn Films, 2011). For the most part, students have been impressed by this moving documentary, which chronicles the efforts of former Maldives President Mohamed Nasheed to confront the threat of sea-level rise to his low-lying island nation.

What follows is a sample syllabus from the Fall 2011 iteration of GEH:

Course Description: This course examines the environmental history of the world since 1900 with a particular focus on Latin America, Sub-Saharan Africa, and China. We will use books, articles, films, and a range of online media to illuminate the comparative and interdisciplinary possibilities of global environmental history. In addition to studying the past, we will explore how to use historical knowledge in the formulation of policy recommendations and grassroots initiatives for addressing contemporary environmental issues.

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Assignments:

Three short papers: During the second week of the semester, I will provide you with a list of possible essay topics for the three short papers that you will write this semester. Each of these topic questions will ask you to use your knowledge of environmental history to formulate a policy recommendation or design a grassroots initiative to help solve a contemporary problem. For each of the essays, you will have three or four options from which to choose. If you have taken careful notes during my class lectures, read the assigned articles, participated in discussions, and completed the book for each unit, you should not have to do extensive research for these short-paper assignments. Be sure to support your arguments with properly cited sources. You may cite my lectures as “Edward Melillo, ‘in-class lecture,’ ... date.” Your essays should be between 5-6 pages in length (no longer), 12-point font, and double-spaced. Each essay is worth 15% of the final grade. You will hand in your hard copy of each essay at the end of class on the day that it is due. Late assignments will lose a grade point per day (e.g. A becomes A-).

Three Map Quizzes: During the Latin America, Africa, and China units, I will ask you to locate a series of relevant countries, key cities, and/or major ecological and topographical zones on a map. One week prior to each quiz, I will provide you with a study guide.

Occasional Reading Reviews: When necessary, I will ask you to respond to a few, short questions on the reading assignments for a particular session.

Final Exam: The final exam is a take-home test, which will consist of short identification questions, a short essay section, two long essays, and a matching section. The goal of the exam is to encourage you to make comparisons and contrasts among the case studies that we have discussed this semester.

Assessment of Your Work: Your final grade will reflect your performance on the short papers (45%), the map quizzes (10%), the final exam (20%), and your class participation (25%). I will factor your reading reviews into your class participation grade.

Required Texts:

John Soluri, *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras and the United States* (Austin: University of Texas Press, 2005);

Tamara Giles-Vernick, *Cutting the Vines of the Past: Environmental Histories of the Central African Rain Forest* (Charlottesville: University Press of Virginia, 2002);

R. Edward Grumbine, *Where the Dragon Meets the Angry River: Nature and Power in the People's Republic of China* (Washington, D.C.: Island Press, 2010);

Alan Weisman, *The World Without Us* (New York: Thomas Dunne Books/St. Martin's Press, 2007).

Course Schedule

Latin America:

Session 1

Lecture/discussion Topic: “Course Introduction.”

Assignments for next session:

- Lise Sedrez, “Environmental History of Modern Latin America,” in *A Companion to Latin American History*, ed.

Thomas H. Holloway (Malden, Mass.: Blackwell Publishing, 2011), 443-60;

- Mark Carey, “Latin American Environmental History: Current Trends, Interdisciplinary Insights, and Future Directions,” *Environmental History* 14, no. 2 (2009): 221-52
- Myrna Santiago, “Rejecting Progress in Paradise: Huastecs, the Environment, and the Oil Industry in Veracruz, Mexico, 1900-1935,” *Environmental History* 3, no. 2 (1998): 169-88.

Session 2

Lecture/discussion Topic: “The Social Ecology of Mexican Oil: An Environmental History of Vera Cruz, Mexico, 1900-1938.”

Assignments for next session:

- *Banana Cultures*, Chapters 1-4;
- Peter B.R. Hazell, “Green Revolution: Curse or Blessing?” *International Food Policy Research Institute* (2002), available at: <http://www.ifpri.org/pubs/ib/ib11.pdf>

Session 3

Lecture/discussion Topic: “The Green Revolution in Mexico: A Pandora’s Box of Possibilities, 1944-Present”

Assignment for next session:

- Paul S. Sutter, “Nature’s Agents or Agents of Empire?: Entomological Workers and Environmental Change during the Construction of the Panama Canal,” *Isis* 98, no. 4 (2007): 724-54;
- Look at Google Maps satellite image of the Panama Canal: <http://maps.google.com/maps?q=Panama+canal&ll=9.277994,-79.913006&spn=0.115880,0.204826&t=k&hl=en>

Session 4

Lecture/discussion Topic: “A Diseased Artery: Mosquitoes, Race, Gender, and the Making of the Panama Canal, 1904-1914.”

MAP QUIZ #1 – Latin America

Assignment for next session:

- Steve Marquardt, “Pesticides, Parakeets, and Unions in the Costa Rican Banana Industry, 1938-1962,” *Latin American Research Review* 37, no. 2 (2002): 3-36;
- Complete *Banana Cultures* (Chapters 5-8).

Session 5

Lecture/discussion Topic: Discussion of *Banana Cultures* and “Pesticides, Parakeets, and Unions...”

Assignment for next session:

- Philip M. Fearnside, “Deforestation in Brazilian Amazonia: History, Rates, and Consequences,” *Conservation Biology* 19, no. 3 (2005): 680-88;
- Alexi Barrionuevo, “To Fortify China, Soybean Harvest Grows in Brazil,” *The New York Times* (April 6, 2007), available at: <http://www.nytimes.com/2007/04/06/business/worldbusiness/06soy.html>

Session 6

Lecture/discussion topic: “Vegetable Steel: The soybean’s unlikely journey from China to Brazil.”

Assignment for next session:

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- Ed Ewing, "Cuba's Organic Revolution," *The Guardian* (April 4, 2008), available at: <http://www.guardian.co.uk/environment/2008/apr/04/organics.food>

Session 7

Lecture/discussion topic: In-class film – "The Power of Community: How Cuba Survived Peak Oil" (The Community Solution, 2006)

ESSAY #1 DUE AT THE END OF CLASS

Assignment for next session:

- Gregory Maddox, ed., "African Environments in the Age of Conservation and Development," in *Sub-Saharan Africa: An Environmental History* (Santa Barbara: ABC-CLIO, 2006);
- Jane Carruthers, "Tracking in Game Trails: Looking Afresh at the Politics of Environmental History in South Africa," *Environmental History* 11, no. 4 (2006): 804-29;
- William Beinart, "African History and Environmental History" (June 11, 2001): <http://www.h-net.org/~environ/historiography/africaeh.htm>

Sub-Saharan Africa:

Session 8

Lecture/discussion topic: "Africa's history is more than the sum of its famines!"

Assignments for next session:

- Lynne Heasley, "Reflections on Walking Contested Land: Doing Environmental History in West Africa and the United States," *Environmental History* 10, no. 3 (2005): 510-31;
- David Quammen (Photographs by George Steinmetz), "Tracing the Human Footprint," *National Geographic Special Issue on Africa* (September 2005), available at: <http://www7.nationalgeographic.com/ngm/0509/feature1/index.html>
- *Cutting the Vines of the Past*, pages 1-68.

Session 9

Lecture/discussion topic: "Peanuts: The Groundnut Scheme in Tanganyika, 1946-1951."

Assignments for next session:

- Dirk Verschuren, *et al.*, "History and timing of human impact on Lake Victoria, East Africa," *Proceedings of the Royal Society of London* 269, no. 1488 (2002): 289-94;
- *Cutting the Vines of the Past*, pages 69-118.

Session 10

Lecture/discussion topic: In-class film: Hubert Sauper, dir., *Darwin's Nightmare* (Image Entertainment, 2007)

Assignments for October 19th session:

- Freek J. Venter, *et al.* "The Evolution of Conservation Management Philosophy: Science, Environmental Change and Social Adjustments in Kruger National Park," *Ecosystems* 11, no. 2 (2008): 173-92;
- Edward M. Bruner and Barbara Kirshenblatt-Gimblett, "Maasai on the Lawn: Tourist Realism in East Africa," *Cultural Anthropology* 9, no. 4 (1994): 435-70;
- Complete *Cutting the Vines of the Past*.

Session 11

Lecture/discussion topic: Finish watching *Darwin's Nightmare* & Discussion of *Cutting the Vines of the Past*.

Session 12

Lecture/discussion topic: "Frozen in Time, Yet Forced to Change: The Maasai and Serengeti National Park, 1921-2008."

MAP QUIZ #2 – Sub-Saharan Africa

Assignment for next session:

- Doctors Without Borders/Médecins Sans Frontières, "Sleeping Sickness," (2008), available at: <http://www.doctorswithoutborders.org/news/issue.cfm?id=2401>

Session 13

Lecture/discussion topic: "The Strange Career of Sleeping Sickness: From Ecological Equilibrium to Neglected Disease, 1896-2007."

Assignment for next session:

- Judith A. Carney, "African Rice in the Columbian Exchange," *The Journal of African History* 42, no. 3 (2001): 377-96.

Session 14

Lecture/discussion topic: "Rice and Race: Re-examining African Contributions to the Columbian Exchange."

Assignment for next session:

- Khadija Sharife, "DRC's magic dust: Who benefits?" *Pambazuka News* 468 (February 4, 2010), available at: <http://www.pambazuka.org/en/category/features/61992/>
- Victoria Brittain, "Colonialism and the Predatory State in the Congo," *New Left Review* 1, no. 236 (1999), available at: <http://www.newleftreview.org/?view=2085>

Session 15

Lecture/discussion topic: "A Ghost in the 'Lungs' of the World: From Rubber to Coltan in the Congo, 1885-2008."

ESSAY #2 DUE AT THE END OF CLASS

Assignment for next session:

- Micah S. Muscolino, "Global Dimensions of Modern China's Environmental History," *World History Connected* 6 (2009), available at: <http://worldhistoryconnected.press.illinois.edu/6.1/muscolino.html>
- J.R. McNeill, "China's Environmental History in World Perspective," in *Sediments of Time: Environment and Society in Chinese History*, ed. Mark Elvin and Liu Tsui'jung (New York: Cambridge University Press, 1998), 31-49.

China:

Session 16

Lecture/discussion topic: "All the World's a Stage...and China Has the Most Players!"

Assignment for next session:

- *Where the Dragon Meets the Angry River*, 3-59.

Session 17

In-class film: *Manufactured Landscapes* (Zeitgeist Films, 2007)

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Session 18

Lecture/discussion topic: “‘Revolution Is Not a Dinner Party’: A Social and Environmental History of The Great Leap Forward, 1958-62.”

Assignment for next session:

- *Where the Dragon Meets the Angry River*, 60-107.

Session 19

Lecture/discussion topic: In-class film: *Up the Yangtze* (National Film Board of Canada, 2007) and discussion.

Assignment for next session:

- Complete *Where the Dragon Meets the Angry River*;
- Susan Greenlaugh, “Science, Modernity, and the Making of China’s One-Child Policy,” *Population and Development Review* 29, no. 2 (2003): 163-96.

Session 20

Lecture/discussion topic: “A Nation of ‘Little Emperors’: China’s Planned Birth (One-Child) Policy, 1979-Present” & discussion of *Where the Dragon Meets the Angry River*.

Assignment for next session:

- Xu Honggang and Zhang Chaozhi, “National Parks in Transition: Wuyishan Scenic Park in China,” in *Tourism and National Parks: International Perspectives on Development, Histories and Change*, ed. Warwick Frost and C. Michael Hall (New York: Routledge, 2009), 225-37.

Session 21

Lecture/discussion topic: “Eco-Tourism with Chinese Characteristics”

Assignment for next session:

- Kenneth Pomeranz, “Political Economy and Ecology on the Eve of Industrialization: Europe, China, and the Global Conjunction,” *The American Historical Review* 107, no. 2 (2002): 425-46.

Session 22

Lecture/discussion topic: “Life on the Hydrocarbon Frontier: Building the Energy Foundations for the World’s Most Populous Country.”

MAP QUIZ #3 – China

Assignment for next session:

- Megan Sweeney and Susan McCouch, “The Complex History of the Domestication of Rice,” *Annals of Botany* 100, no. 5 (2007): 951-57.

Session 23

Lecture/discussion topic: “Eating from the ‘Iron Rice Bowl’: Rice Culture and Cultivation in Chinese History.”

ESSAY #3 DUE AT THE END OF CLASS

Assignment for next session:

- *The World Without Us*, 1-216.

The World:

Session 24

Lecture/discussion topic: In-class film: *Black Gold* (Mongrel Media, 2006)

Assignment for next session:

- *The World Without Us*, pages 217-end of book.
- Immanuel Wallerstein, “The Ecology and the Economy: What is Rational?” Paper delivered at Keynote Session of Conference, “World System History and Global Environmental change,” Lund, Sweden, 19-22 September 2003: <http://www.binghamton.edu/fbc/iwecoratl.htm>

Session 25

Lecture/discussion topic: “Using Environmental History to Anticipate Environmental Futures” (Discussion of *The World Without Us*).

Assignment for next session:

- Mike Davis, “Who Will Build the Ark?” *61 New Left Review* (Jan.-Feb. 2010): 29-46;
- Dipesh Chakrabarty, “The Climate of History: Four Theses,” *Critical Inquiry* 35, no. 2 (2009): 197-222.
- Spencer Weart, “Spencer Weart on Depicting Global Warming,” *Environmental History* 10, no. 4 (2005): 770-75.

Session 26:

Lecture/discussion topic: “Temperature Rising: Environmental Movements in the Anthropocene.”

Final Assignment: Take-home final exam due at my office by 5:00 PM.

1 Donald Worster, as quoted in Nicolaas Mink, “Forum: It Begins in the Belly,” *Environmental History* 14, no. 2 (2009): 312.

2 For discussions of the analytical possibilities that emerge from an emphasis on transnational connections in history, see Edward D. Melillo, “The First Green Revolution: Debt Peonage and the Making of the Nitrogen Fertilizer Trade, 1840-1930,” *American Historical Review* 117, no. 4 (2012): 1028-1060; Micol Seigel, “Beyond Compare: Comparative Method after the Transnational Turn,” *Radical History Review* issue 91 (Winter 2005), 62-90; and Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (Princeton: Princeton University Press, 2000), 3-27.

3 See Ralph Kingston, “Mind over Matter? History and the Spatial Turn,” *Cultural and Social History* 7, no. 1 (2010): 111-121; and Peter Stearns, “Social History and Spatial Scope,” *Journal of Social History* 39, no. 3 (2006): 613-14. Much recent work on the spatial dimensions of the past draws upon the insights of Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Cambridge, Mass.: Blackwell Publishing, 1991).

4 For examples, see Steven S. Volk, “How the Air Felt on My Cheeks: Using Avatars to Access History,” *The History Teacher* 46, no. 2 (2013): 193-214; and Edith Sheffer, “Creating Lives in the Classroom,” *Chronicle of Higher Education* (November 22, 2009), available at: chronicle.com/article/Teaching-Matters-Creating/49211/ For a much earlier version of this pedagogical approach, see Harold Gorvine, “Teaching History through Role Playing,” *The History Teacher* 3, no. 4 (1970): 7-20.

5 Garret Hardin, “The Tragedy of the Commons,” *Science* 162,

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no. 3859 (1968): 1243-48. For a retrospective critique of Hardin's concepts, see David Feeny, et al., "The Tragedy of the Commons: Twenty-Two Years Later," *Human Ecology* 18, no. 1 (1990): 1-19.

6 For a more general introduction to the key thinkers and major works of political ecology, see Paul Robbins, *Political Ecology: A Critical Introduction*, 2nd ed. (Malden, Mass.: John Wiley & Sons, 2012).

7 Jennifer Schuessler, "Starting Over" *The New York Times* (September 2, 2007): <http://www.nytimes.com/2007/09/02/books/review/Schuessler-t.html?pagewanted=all>

8 Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Inquiry* 35, no. 2 (2009): 197-222.

9 McNeill's book is just one of many recent works that attempt to address the environmental history of the world in a single volume. For an insightful review of some of these texts, see Robert B. Marks, "World Environmental History: Nature, Modernity, and Power," *Radical History Review* issue 107 (Spring 2010): 209-24. Anthropologist Alf Hornborg has pointed out, "Although rich in empirical detail, studies in environmental history often strike world-system analysts as theoretically underdeveloped. They generally do not address the

fact that landscape changes in core areas have been recursively interconnected with those in peripheral areas. Although several recent books claim to deal with global environmental history... they are rarely 'global' in this sense. They tend to offer a series of national and local case studies, focusing more on the environmental records of individual nations and groups than on the global historical processes and material flows that have generated their problems as well as their options." See Alf Hornborg, "Towards a Truly Global Environmental History: A Review Article," *Review: Journal of the Fernand Braudel Centre* 33, no. 4 (2010): 295.

10 In 1956, Shell geoscientist Marion King Hubbert suggested that the history of oil extraction from the lithosphere followed a bell curve with a point of maximum volume followed by a decline. Hubbert correctly predicted that petroleum production in the lower 48 states would peak in 1970. See M.K. Hubbert, "Nuclear Energy and the Fossil Fuels," A Paper Presented before the Spring Meeting of the Southern District Division of Production, American Petroleum Institute, Plaza Hotel, San Antonio, Texas (7-9 March, 1956), available at: www.hubbertype.com/hubbertype/1956/1956.pdf

11 A streaming video of "The Warriors of Qiugang" is available at: http://e360.yale.edu/feature/the_warriors_of_qiugang/2358/



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According to the IPCC, the extent of climate change effects on individual regions will vary over time and with the ability of different societal and environmental systems to mitigate or adapt to change. The IPCC predicts that increases in global mean temperature of less than 1.8 to 5.4 degrees Fahrenheit (1 to 3 degrees Celsius) above 1990 levels will produce beneficial impacts in some regions and harmful ones in others. Net annual costs will increase over time as global temperatures increase. "Taken as a whole," the IPCC states, "the range of published evidence indicates that t

The Communicative Approach The communicative approach or Communicative Language Teaching (CLT) is the name which was given to a set of beliefs which included not only a re-examination of what aspects of language to teach but also a shift in emphasis on how to teach!

Non-communicative activities Communicative activities The communication continuum No communicative desire No communicative purpose Form not content One language item only Teacher intervention Materials control A desire to communicate A communicative purpose Content not form Variety of language No teacher intervention No materials c

â€œFor the first time in the history of the world,â€ she wrote, â€œevery human being is now subjected to contact with dangerous chemicals.â€ Shortly before her death she expressed the emerging ecological ethic in a magazine essay: â€œIt is a wholesome and necessary thing for us to turn again to the Earth and in the contemplation of her beauties to know the sense of wonder and humility.â€

The ecology symbol designed by comic artist Ron Cobb.Â Nearly a half-century after the foundation of Greenpeace, the global ecology movement has reached every corner of the world, with thousands of groups springing up to defend the environment. Meanwhile, the challenges facing us grow ever more daunting. The next half-century will test whether or not humanity can respond to the challenge. The chemistry of the Earth's atmosphere has emerged as a central theme in studies of global change. Atmospheric chemistry provides the scientific foundations to understand a number of phenomena that are part of global change. These.

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