

Contents

<i>Preface</i>	iv
<i>Series</i>	vi
<i>Correlation Guide</i>	xiii
<i>Topic Guide</i>	xvi
<i>Internet References</i>	xix
<i>World Map</i>	xxiv



UNIT 1 Human Population Growth

Unit Overview	xxvi
---------------	------

- 1. Population, Human Resources, Health, and the Environment: Getting the Balance Right**, Anthony J. McMichael, *Environment*, January/February 2008
Both the 1987 Brundtland Report and Millennium Development Goals announced in 2000 recognized a clear association between a **healthy environment**, human well-being, and achieving **sustainable relations** with our planet. McMichael argues, however, that the key to reaching those goals will depend on finding the right **consumption balance** between people and **global resources**. 3
- 2. Booms, Busts, and Echoes**, David E. Bloom and David Canning, *Finance & Development*, September 2006
What will influence the future direction of **global development**? The authors believe massive global **demographic changes**, and not population growth, will have the greatest influence. This essay reviews some major social/economic issues that **demographic transitions** will generate in the **developing world**. Can serious **environmental changes** be inferred from these predictions as well? 12
- 3. Consumer Trends in Three Different “Worlds”**, Andy Hines, *The Futurist*, July/August 2008
Futurist Andy Hines reviews a list of **consumer trends** and examines how they may unfold in **three different “worlds”** in the next decade. Although the author focuses primarily on the “business implications” of each trend, it is not difficult for the reader to consider the varying global **environmental impacts** these emerging **resource consumption patterns** might suggest. 18
- 4. The New Population Bomb: The Four Megatrends That Will Change the World**, Jack A. Goldstone, *Foreign Affairs*, January/February 2010
The author believes four **population megatrends** will have significant political and economic consequences across the globe. However, the **impacts will vary between places and peoples** and will most likely result in variable environmental consequences. Policy makers must reconsider the old **three-world economies paradigm** and look at a new one based on **changing demographics**. 23



UNIT 2 Global Development

Unit Overview	28
---------------	----

- 5. It’s a Flat World, After All**, Thomas L. Friedman, *The New York Times*, April 3, 2005
The article summarizes the author’s book, *The World Is Flat*. Friedman believes that certain **technological trends** are leading **globalization** and leveling the economic playing field (flattening Richard Florida’s socioeconomic topography) via new, **technology based geo-economics**. However, **gaps** appearing on the playing field—“ambition,” “numbers,” and “education”—may present new wrinkles on this **flat world**. 31

The concepts in bold italics are developed in the article. For further expansion, please refer to the Topic Guide.

6. **The World Is Spiky**, Richard Florida, *The Atlantic*, October 2005
 Professor Florida employs four **maps** to depict a kind of **world socioeconomic topography** to refute Thomas Friedman’s notion of a “**flat world**.” The author’s “**spike**” **maps** illustrate the **variable geography** of population, urban, innovation, and scientist-origin **micro-environment locations** around the globe. The maps’ peaks and valleys suggest anything but a “flat socioeconomic world.” 36
7. **Promises and Poverty**, Tom Knudson, *The Sacramento Bee*, September 23, 2007
 While companies often market their products by boasting what they do for the environment, the **production function** of coffee frequently involves the **generation of negative socioeconomic–environmental externalities**. With this in mind, the author examines the **real price** of gourmet coffee with a look at Starbucks’ **eco-friendly** approach to coffee production. 40
8. **A User’s Guide to the Century**, Jeffrey D. Sachs, *The National Interest*, July/August, 2008
 According to the author, the twenty-first century holds a paradox. The “**new world order**” holds both the promise of shared prosperity and the risk of widespread global conflicts. Jeffrey D. Sachs describes a **converging world of technological and economic changes** combining with **variable global population growth** and **inequalities of wealth**. Such dynamics, the author believes, are threatening the **environment** and our **global stability**. However, Sachs offers five guideposts we can follow for constructing future foreign policies that may help us avert disaster. 47



UNIT 3 Feeding Humanity

Unit Overview 52

9. **Radically Rethinking Agriculture for the 21st Century**, N. V. Fedoroff et al., *Science*, February 12, 2010
 Environmental experts are becoming increasingly aware of the **critical challenge** that producing **enough food** for humanity in the twenty-first century and beyond presents. According to international researchers, new **agricultural technologies** are available to help meet that challenge. But new **attitudes** and better alignment of current **regulatory policies** with **scientific knowledge** must be addressed. 55
10. **The Politics of Hunger: How Illusion and Greed Fan the Food Crisis**, Paul Collier, *Foreign Affairs*, November/December 2008
 Noted economist Paul Collier argues that the **science of food production** is well understood. And, in order to **feed the hungry**, according to the author, we must attend to three steps: move from **small-scale** to **large-scale farming**, loosen constraints on using **agricultural science and technology**, and drop our obsession with **biofuels**. 58
11. **Across the Globe, Empty Bellies Bring Rising Anger**, Marc Lacey, *The New York Times*, April 18, 2008
Increasing food prices are stressing working and middle-income budgets around the world. But when the price of food makes it **unaffordable**, budgetary stress is replaced by **hunger, starvation**, and an **angry citizenry**. **Civil conflict** and **political instability** follow. The evidence is already being witnessed in the **world’s poorest countries**. 64
12. **How to Feed 8 Billion People**, Lester R. Brown, *The Futurist*, January/February 2010
 Noted environmentalist Lester R. Brown believes **global demand for food** and **diminishing returns of the Green Revolution** are leading to an impending **food crisis**. The author argues that to avoid the crisis, we need to better **manage** the factors that affect our **food production systems**: population, climate change, water, soils, and **consumption behaviors**. 66



UNIT 4 A Thirsty Planet

Unit Overview

70

13. **Where Oil and Water Do Mix: Environmental Scarcity and Future Conflict in the Middle East and North Africa**, Jason J. Morrisette and Douglas A. Borer, *Parameters*, Winter 2004–2005

The authors explain how the concept of “**environmental scarcity**” is linked to **political unrest** and can lead to open **conflict**. They examine the **environmental resource of water** as a potentially significant variable, which may contribute to future conflicts in regions of **water scarcity** and highly **competitive access** (e.g., the Middle East and North Africa).

73

14. **The Big Melt**, Brook Larmer, *National Geographic*, April 2010

Earth’s water is often described in **environmental science** in terms of the “**interacting compartments**” where it resides. One compartment is **glaciers** (accessed via melt water), which regions like Asia depend on for **agriculture and domestic use**. Brook Larmer examines the **glacial shrinkage** in these areas and the potential for **future conflict** in the region.

81

15. **The World’s Water Challenge**, Erik R. Peterson and Rachel A. Posner, *Current History*, January 2010

Some experts estimate that over the next twenty years, we may see as much as a **40 percent gap between global water demand and available resources**. Growing demand, **consumption**, and **climate change** will contribute to increasing **competition**. Despite this situation, the authors see little effort aimed at establishing a **value for this resource**, which could aid in **managing its sustainability**.

85



UNIT 5 Changing Climate

Unit Overview

88

16. **Climate Change**, Bill McKibben, *Foreign Policy*, January/February 2009

The author contends the science of **climate change** is settled, its underlying dynamics are for all practical purposes clear, and policy choices are obvious. McKibben believes the only obstacles to averting **climate catastrophe** are lack of **political will**, **wishful thinking**, the “**blame game**,” and **admitting that it won’t be easy**. But what’s the alternative?

91

17. **The Last Straw**, Stephan Faris, *Foreign Policy*, July/August 2009

Environmentally and economically stressed countries are typically unstable countries; this also makes them particularly vulnerable to **climate change disturbances**. By some estimates, one in four countries, which include some of the most unstable and volatile, will be at risk for **climate change–induced conflict**. Pakistan and South Asia provide ready evidence.

94

18. **How to Stop Climate Change: The Easy Way**, Mark Lynas, *New Statesman*, November 8, 2001

What can we do to make a difference, right now, in our **carbon consumption**? Mark Lynas suggests three easy and effective ways (if done collectively). By looking at the **problem** in its **components**, Lynas says it’s clear we need to stop **debating** and start doing, look at the **big wins**, and use **technology**.

96

19. **Global Warming Battlefields: How Climate Change Threatens Security**, Michael T. Klare, *Current History*, vol. 106, 2007

Climate change is having and will continue to have **variable environmental consequences** in different **regions** of the world and **affect different peoples in different ways**. The author explores this variability and how it will influence **future scenarios of sociocultural conflict, resource competition, metrological instability**, and ultimately world peace.

99



UNIT 6

Endangered Diversity

Unit Overview

106

20. Executive Summary from Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 3*, 2010

Concern continues among biologists regarding the urgency to maintain **biodiversity**. Species loss threatens **ecosystems' stability** and the future of human well-being. Although world governments agreed in 2002 to achieve a **significant reduction of biodiversity** loss by 2010, this has not happened. Without continued action, the future of human civilization is at stake.

109

21. When Diversity Vanishes, Don Monroe, *Santa Fe Institute Bulletin*, Spring 2008

Experts explored the idea of “**diversity collapse**” in contexts ranging from **ecosystems** to **food systems** to **socioeconomic systems**. They argue that natural and human systems that **maintain diversity** are better able to **respond and adapt to changing environmental conditions** and thereby avoid the “**tipping point**” at which ecosystems and societies can **collapse**.

113

22. When Good Lizards Go Bad: Komodo Dragons Take Violent Turn, Yaroslav Trofimov, *The Wall Street Journal*, August 25, 2008

When **dragons** begin eating children, does this change the rules of “**protecting biodiversity**”? In this article, **multiple species**—people, dragons, deer—share the same **habitat and compete for resources**. But the age-old ecological principal of “**resource partitioning**” appears to be breaking down. **Environmental actors, ethics, and biodiversity** compete for limited space.

116

23. Cry of the Wild, Sharon Begley, *Newsweek*, August 15, 2007

Hunting is big business. Hunting **rare, endangered, protected species** can be bigger business. And the **status symbolism** attached to eating such animals (“**bushmeat**”) has elevated hunting to a global, multibillion dollar business. Author Sharon Begley believes this kind of hunting is not due to **subsistence needs**, or **poverty**, but rather to simple **profiteering**.

118



UNIT 7

Degrading Ecosystems

Unit Overview

120

24. Ecosystems and Human Well-Being, *Millennium Ecosystem Assessment*, 2005, Island Press.

Human transformation of the Earth has contributed to human well-being advancements. But not everyone has **benefited equally**. Much advancement has resulted in **ecosystem impacts**, and to the people who still **rely** directly on those **ecosystems**. To ensure future **environmental sustainability** and **quality-of-life** for all people, substantial social–economic–political changes will be needed.

123

25. The Geography of Ecosystem Services, James Boyd, *Resources*, Fall 2008

James Boyd believes **geography matters** because **nature moves**, and the challenge for **ecosystem scientists and managers** is to “relate cause and effect when the cause-and-effect relationship is spatial.” These relationships are referred to as “**spatial production functions**,” involve **biophysical** and **economic** components, and can be illustrated with **maps** and **GIS** tools.

129

26. Ecosystem Services: How People Benefit from Nature, Rebecca L. Goldman, *Environment*, September/October 2010.

How do people benefit from nature? What are **ecosystem services**? Why are ecosystem services important for **sustainable development**? How can we encourage governments and industry leaders to **implement ecosystems service strategies**? Rebecca Goldman addresses these questions and argues that not only are ecosystem services the **link between the natural world and people**, but that people understanding the connection can translate into new and increased interest in **sustainable resource management**.

132

The concepts in bold italics are developed in the article. For further expansion, please refer to the Topic Guide.



UNIT 8

Quest for Power

Unit Overview

138

27. **Global Energy: The Latest Infatuations**, Vaclav Smil, *American Scientist*, vol. 99, no. 3, May/June 2011

While the world is infatuated with discovering **new global energy sources**, Professor Smil argues that many ideas are wrought with **economic limitations, technical challenges**, and **exaggerated expectations**. Not to mention the cultural, social, and political **transition times** to make changes. The author concludes: Could we go wrong with a little **energy use moderation**?

141

28. **Seven Myths about Alternative Energy**, Michael Grunwald, *Foreign Policy*, September/October 2009

In the opinion of award-winning environmental journalist Michael Grunwald, the existence of a “**magic key**” that will **open the door** to our **oil alternative** is largely **mythical**. Popular proposed **alternatives** and **technological fixes** have a **lot to prove** to a lot of people in a **very short time**.

148

29. **Half a Tank: The Impending Arrival of Peak Oil**, Mark Floegel, *Multinational Monitor*, January/February 2007

Has oil production “**peaked**,” and when will we run dry? Given the state of **petroleum geological technology** and **economic science**, the answers should be a simple **matter of mathematics**. But if oil companies and nations are keeping some of the **numbers to themselves**, what then? The author believes we’ll know soon enough.

152

30. **It’s Still the One**, Daniel Yergin, *Foreign Policy*, September/October 2009

Oil supplies are dwindling, **new consumers** are emerging around the world, the cast of **traders** is changing, and **new energy sources** are evolving. Pulitzer Prize-winning author and chairman of the Cambridge Energy Research Associates believes the shape of our **current geopolitical economics of oil** is set to also **change**, perhaps radically.

156

31. **Gas Costs Squeeze Daily Life: Survey Reveals How High Prices Have Pushed Us into New Routines**, Judy Keen and Paul Overberg, *USA Today*, May 9, 2008

A useful microeconomics concept is “**demand elasticity**,” which measures the responsiveness of consumer demand to change in prices. The authors report how **record gas prices** (2008) prompted Americans to **drive less** (2008) for the first time in nearly three decades. Has **consumer demand** snapped back to 2008? Or has Americans’ **elastic appetite for gas** begun to sag?

160



UNIT 9

A Global Environmental Ethic?

Unit Overview

162

32. **Do Global Attitudes and Behaviors Support Sustainable Development?** Anthony A. Leiserowitz, Robert W. Kates, and Thomas M. Parris, *Environment*, November 2005

Although there appears to be no **global-scale survey** data identifying peoples’ attitudes or preferences for a specific **end-state of economic development**, there is a vague consensus regarding the sensibility of “**sustainability**.” However, the author argues that achieving **sustainability** requires that changes in **environmental values and attitudes** **translate into significant behaviors** within human societies.

165

33. **The Ethics of Respect for Nature**, Paul W. Taylor, *Environmental Ethics*, Fall 1981
The **human-centered** (anthropomorphic) attitude toward nature has dominated most **Western thought** for centuries. However, new ideas about our **relationship with nature**—like **biocentric** and **ecocentric**—began to emerge in the twentieth century. Now, Professor Paul W. Taylor proposes a **new approach** to viewing our **relationship with nature**—a **life-centered system of ethics**. 181
34. **Environmental Justice for All**, Leyla Kokmen, *Utne Reader*, March/April 2008
Can **environmental degradation** and **poverty** be battled at the same time? Leyla Kokmen says yes, but it's a delicate balancing act. The author believes today's **environmental justice proponents** are focusing less on **environmental and social degradation cleanup**, and instead, being **proactive** and realizing that "you have to go upstream . . . to **stop bad things from happening**." 186
35. **Life, Religion and Everything**, Laura Sevier, *The Ecologist*, September 1, 2007
Forty-five years ago Lynn White, Jr. proposed that the **historical roots of our ecological crisis** could be traced to **Christianity**. In this article, the author examines the **renewed focus** by all major **religious groups** to redefine our **relationship with the environment** by building a more **ethically environmental relationship** between God, science, man, and Mother Earth. 189



UNIT 10 Consuming the Earth

Unit Overview

36. **Consumption, Not Population Is Our Main Environmental Threat**, Fred Pearce, *Yale Environment 360*, April 2009
The author argues that by almost any measure, a **small proportion of the world's population consumes the majority of the world's resources** and is responsible for most of its **pollution**. The essay encourages the reader to consider the possibility that **material consumption behavior**, not population, may be our greatest **environmental threat**. 194
37. **Consumption and Consumerism**, Anup Shah, *www.globalissues.org*
The **consumption gap** was wider in 1995 than in 2005. But in 2005, the wealthiest 20 percent of the world still accounted for 76.6 percent of total private consumption; the poorest 20 percent just 1.5 percent. The United Nations argues that in 2005, consumption was a **leading cause of environmental degradation**. Today, the consumption–poverty–inequality environmental nexus is **accelerating**. In 2012, . . . ? 199
38. **How Much Should a Person Consume?** Ramachandra Guha, *Global Dialogue*, Winter 2002
Guha argues, "There are . . . more than 300 professional **environmental historians** in the United States . . . and not one has seriously studied the **global consequences** of the **consumer society** . . . **American Way of Life**." The essay examines the answer to the title's question and concludes there are vast **inequalities of global consumption**. 202
39. **Reversal of Fortune**, Bill McKibben, *Mother Jones*, March 2007
Bill McKibben observes that our **single-minded focus on unbridled growth credo** is bumping humanity up against **profound ecological limits** like climate change and resource limits like oil. We have succeeded not in finding more **happiness**, but rather in **degrading our natural capital** and some of very things that made us happy originally. 212

- Approaching Environmental Issues Paradigm Worksheet** 222
Test-Your-Knowledge Form 223

The concepts in bold italics are developed in the article. For further expansion, please refer to the Topic Guide.