

Gross world product (GWP)—the aggregated estimate of total output of goods and services in countries around the world—increased 5 percent in 2004, to \$55 trillion (in 2003 dollars).¹ (See Figure 1.) This rapid growth was primarily driven by expansion in industrial markets and by explosive growth in emerging markets, particularly China.² Yet with world population increasing by 73 million in 2004, per capita GWP grew less rapidly, rising 3.8 percent to \$8,587.³

The U.S. gross domestic product (GDP) grew 4.3 percent in 2004, driven by domestic consumption and business investment, though high energy prices curbed growth late in the year.⁴ Japan also demonstrated strong growth at 4.4 percent, propelled by business investments, exports, and a resurgence in domestic demand.⁵ The European Union's economy expanded too, though more slowly—with GDP increasing by 2.2 percent.⁶ Much of this growth came from exports.⁷

Some of the most impressive expansion occurred in Asian developing countries, particularly China and India, which grew at 9.0 percent and 6.4 percent respectively.⁸ Both benefited from significant foreign investment, increasing domestic demand, and a recovery in the information technology sector.⁹ Africa's economy grew 4.5 percent, driven primarily by improved access to industrial-country markets, reduced debt burdens, and high commodity prices, particularly oil.¹⁰ The Middle East's economy also benefited from high oil prices, growing 5.1 percent.¹¹ With the region's oil production now nearing capacity, however, economic growth is plateauing.¹²

In recent years, an increasing array of experts, institutions, and even governments have questioned the value of GDP as an accurate measure of economic growth or national economic progress. The primary failing is that GDP is an absolute measure. Thus all expenditures—regardless of their worth to society—are counted as positives.¹³ Moreover, the worth of some essential economic sectors, like subsistence farming and household maintenance, is completely omitted.¹⁴

Another flaw is GDP's omission of economic

externalities, like resource depletion and pollution. As human economic systems depend on natural resources and services, such as waste treatment and climate regulation, the failure to incorporate these into economic measures minimizes the worth of these ecosystem services. One analysis of humanity's consumption of renewable resources finds that humanity is using resources 21 percent faster than Earth can renew them.¹⁵ (See Figure 2.) This conservative estimate, which does not include the needs of other species, nonrenewable resource use, or pollution, notes that on average each person uses the resources of 2.2 “global hectares” of productive land.¹⁶ Yet only 1.8 global hectares on average is available per person worldwide.¹⁷

To counter the failings of the GDP measure, Redefining Progress, a U.S. nongovernmental research group, created the genuine progress indicator (GPI). This alternative measure adds ignored sectors like unpaid child care and volunteer work, while subtracting uncounted economic costs such as traffic, pollution, and crime. In the United States, per capita GDP grew 56 percent from 1982 to 2002.¹⁸ Yet per capita GPI grew just 2 percent during that period, because the added value of beneficial services was almost entirely countered by growth in pollution and other social ills.¹⁹ (See Figure 3.)

While the Redefining Progress initiative has drawn attention to the flaws of GDP, most promising is the Chinese government's plan to start incorporating environmental costs into its economic calculations. In 2004, China announced that it would implement a “Green GDP” measure in the next five years that would subtract resource depletion and pollution costs from GDP.²⁰ Early research suggests that China's average GDP growth between 1985 and 2000 would have been 1.2 percent lower had environmental costs been subtracted.²¹ If fully implemented, not only would the Green GDP indicator help put China on a more sustainable economic path, it could push other major economies to follow suit—which in turn could transform the types of economic development the world values.

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Figure 1. Gross World Product, 1950–2004

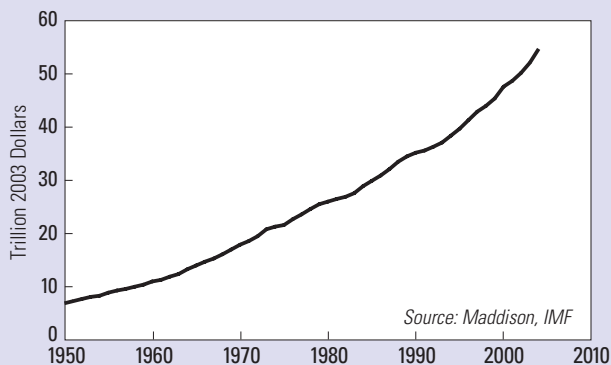


Figure 2. World Ecological Footprint, 1961–2001

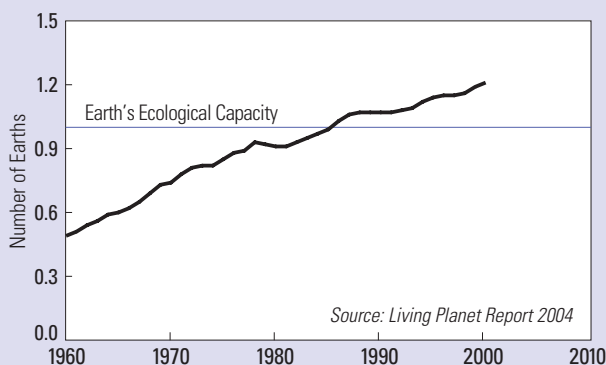
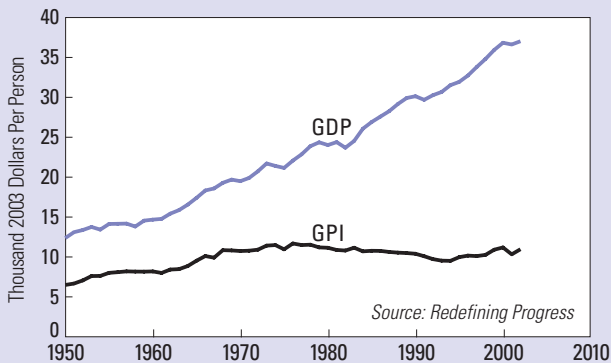


Figure 3. GDP and GPI, United States, 1950–2002



Gross World Product, 1950–2004

Year	Total (trill. 2003 dollars)	Per Capita (2003 dollars)
1950	6.9	2,710
1955	8.9	3,192
1960	11.0	3,607
1965	14.0	4,179
1970	17.9	4,825
1971	18.6	4,926
1972	19.5	5,057
1973	20.8	5,286
1974	21.3	5,308
1975	21.6	5,292
1976	22.7	5,454
1977	23.6	5,580
1978	24.6	5,729
1979	25.5	5,832
1980	26.0	5,849
1981	26.5	5,861
1982	26.9	5,827
1983	27.6	5,891
1984	28.9	6,056
1985	29.9	6,160
1986	30.9	6,270
1987	32.1	6,387
1988	33.5	6,551
1989	34.5	6,649
1990	35.2	6,671
1991	35.6	6,641
1992	36.3	6,668
1993	37.1	6,711
1994	38.4	6,843
1995	39.7	6,978
1996	41.3	7,149
1997	42.9	7,330
1998	44.0	7,415
1999	45.4	7,566
2000	47.6	7,823
2001	48.7	7,914
2002	50.2	8,056
2003	52.1	8,273
2004 (prel)	54.7	8,587

Source: Organisation for Economic Co-operation and Development and International Monetary Fund.

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 12. ACIA, op. cit. note 2, p. 8.
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 15. Atmospheric concentrations from Whorf, op. cit. note 3; temperatures from J. T. Houghton et al., eds., *Climate Change 2001: The Scientific Basis*, Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge, UK: Cambridge University Press, 2001).
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 19. Buckley, op. cit. note 17.
 20. *Ibid.*
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 22. *International Action Programme*, Official Outcome of the Intergovernmental Conference for Renewable Energies, Bonn, Germany, 30 August 2004, pp. 42–43.
 23. Stuart Penson, “EU Launches Pioneering Emissions Trading Scheme,” *Reuters*, 4 January 2005.
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- ### GLOBAL ECONOMY CONTINUES TO GROW (pages 44–45)
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 2. IMF, op. cit. note 1.
 3. Population data from U.S. Bureau of the Census, *International Data Base*, electronic database, Suitland, MD, updated 30 September 2004; gross world product from IMF, op. cit. note 1.
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 5. *Ibid.*, pp. 3, 30.
 6. *Ibid.*, pp. 3, 27.
 7. *Ibid.*
 8. *Ibid.*, pp. 3, 32.
 9. *Ibid.*
 10. *Ibid.*, pp. 3, 47.
 11. *Ibid.*, pp. 3, 53.
 12. *Ibid.*
 13. OECD, *The Well-being of Nations: The Role of Human and Social Capital* (Paris: 2001), pp. 10–11.
 14. *Ibid.*
 15. World Wide Fund for Nature (WWF), UNEP World Conservation Monitoring Centre, and Global Footprint Network, *Living Planet Report 2004* (Gland, Switzerland: WWF, 2004).
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 20. “China Plans to Set Up Green GDP System in 3–5 Years,” *China Daily*, 12 March 2004.
 21. “Blind Pursuit of GDP To Be Abandoned,” *China Daily*, 5 March 2004.
- ### WORLD TRADE RISES SHARPLY (pages 46–47)
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