

Gross world product (GWP)—the aggregated estimate of the global output of goods and services—increased 2.5 percent in 2002, to \$48 trillion (in 2001 dollars).<sup>1</sup> (See Figure 1.)

Although this means the GWP reached another new high, the increase was below the average of 3.9 percent seen over the years since 1950.<sup>2</sup>

The United States, which accounts for 22 percent of the GWP, increased output by 2.2 percent, driven primarily by robust consumer spending that recovered quickly after the terrorist attacks in September 2001.<sup>3</sup> Latin America's product declined by 0.7 percent, primarily due to the economic crisis in Argentina, which in

turn reduced investor confidence in the region.<sup>4</sup> Asia's economy grew by 3.8 percent, spurred by global trade, consumer demand in China and South Korea, and the start of a recovery in the information technology sector.<sup>5</sup> In Africa, gross regional product grew by 2.4 percent—just shy of the global average—but per capita growth there was a mere 0.3 percent as population increased by 18 million.<sup>6</sup>

With the world's population growing by 74 million in 2002, per capita GWP only increased 1.3 percent, to \$7,714.<sup>7</sup> Because governments need to expand infrastructure to keep up with growing numbers, the benefits of economic growth are limited by population growth.<sup>8</sup>

In recent years, a growing number of experts have challenged GWP as an accurate measure of economic growth, let alone of progress.<sup>9</sup> First and foremost, GWP is an absolute measure, counting all expenditures as positive contributions, regardless of their worth to society.<sup>10</sup> It also omits key economic sectors, like subsistence farming and household maintenance.<sup>11</sup> As a counter to this, Redefining Progress, a U.S. nongovernmental research group, created the Genuine Progress Indicator (GPI), which subtracts costs to the economy such as traffic, pollution, and crime while adding unaccounted benefits such as unpaid child care and volunteer work. In the United States, per capita GDP grew 77 percent from 1975 to 2000—compared with GPI growth of just 2 percent.<sup>12</sup> (See Figure 2.)

GWP also ignores the environmental costs of economic activities and does not factor in the value of nature's services on which the global economy depends. These services, such as food production, waste treatment, and climate regulation, have been estimated to be worth anywhere from \$18 trillion to \$62 trillion—roughly the size of the GWP itself.<sup>13</sup> One recent analysis determined that the wealth of several countries has declined even while gross national product has increased, once depletion of natural capital is factored in.<sup>14</sup>

With growing concern about climate change and shrinking natural resources, many observers are questioning whether traditional economic growth can continue to be thought of as a positive. One measure, the “ecological footprint,” looks at per capita use of renewable resources and compares this to the capacity of Earth to generate them. This conservative estimate, which does not include the needs of other species, nonrenewable resource use, or pollution, finds that on average each person uses the resources of 2.3 “global hectares” of productive land.<sup>15</sup> Yet there is only an average of 1.9 hectares of productive area available per person globally.<sup>16</sup>

Thus humanity is withdrawing resources 20 percent faster than Earth can renew them (see Figure 3) and is consequently depleting the world's ecological assets.<sup>17</sup> Indeed, studies show that humans have fully exploited or depleted two thirds of ocean fisheries and have transformed or degraded up to half of Earth's land.<sup>18</sup>

Few countries have remained within their respective ecological capacities—let alone within the global average—and many have far exceeded them. The United States, for instance, used up 9.7 hectares worth of resources per person in 1999—45 percent more than the 5.3 hectares available to each citizen.<sup>19</sup> Even without continued population growth, if the world were to consume as much meat and use as much fossil fuels as Americans do, it would need the resources of five Earths.<sup>20</sup>

LINKS

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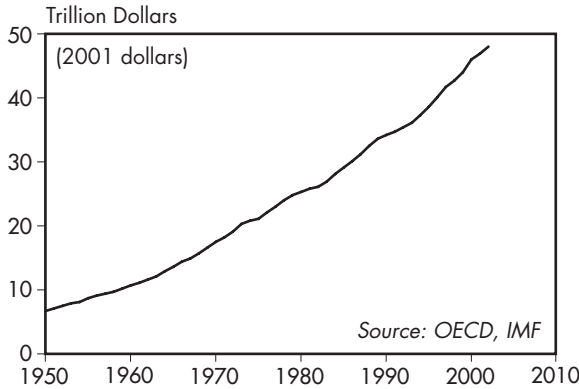


Figure 1: Gross World Product, 1950–2002

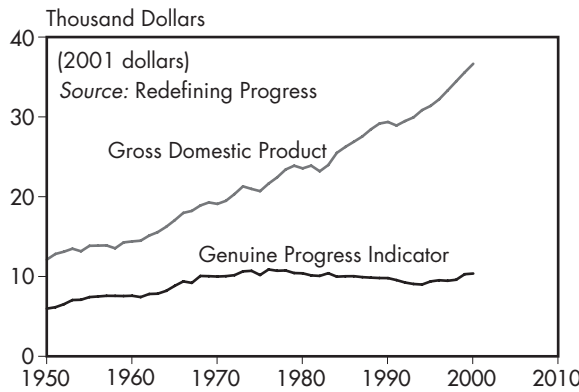


Figure 2: Gross Domestic Product and Genuine Progress Indicator Per Person, United States, 1950–2000

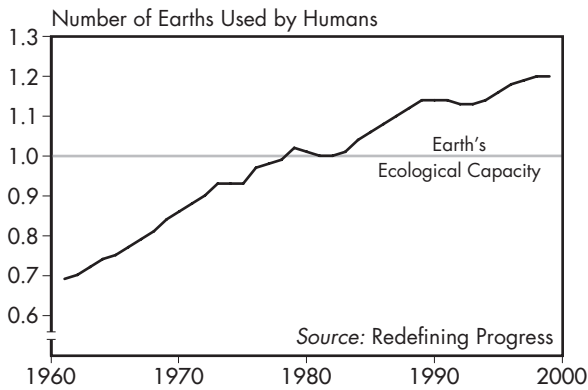


Figure 3: World Ecological Footprint, 1961–99

Gross World Product, 1950–2002

Year	Total (trill. 2001 dollars)	Per Person (2001 dollars)
1950	6.7	2,641
1955	8.7	3,112
1960	10.7	3,516
1965	13.6	4,071
1970	17.5	4,708
1971	18.2	4,805
1972	19.1	4,933
1973	20.3	5,157
1974	20.8	5,174
1975	21.1	5,154
1976	22.1	5,312
1977	23.0	5,432
1978	24.0	5,573
1979	24.8	5,672
1980	25.3	5,688
1981	25.8	5,698
1982	26.1	5,664
1983	26.9	5,728
1984	28.1	5,890
1985	29.1	5,993
1986	30.1	6,101
1987	31.2	6,216
1988	32.5	6,375
1989	33.6	6,470
1990	34.2	6,492
1991	34.7	6,468
1992	35.4	6,499
1993	36.1	6,538
1994	37.3	6,663
1995	38.6	6,791
1996	40.1	6,964
1997	41.7	7,139
1998	42.7	7,202
1999	44.0	7,337
2000	46.0	7,566
2001	46.9	7,617
2002 (prel)	48.0	7,714

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

### ECONOMIC GROWTH INCHES UP (pages 44–45)

1. Angus Maddison, *The World Economy: A Millennial Perspective* (Paris: Organisation for Economic Co-operation and Development (OECD), 2001), pp. 272–321, with updates from International Monetary Fund (IMF), *World Economic Outlook Database* (Washington, DC: December 2002).
2. Ibid.
3. Percentage of gross world product (GWP) and increase from IMF, op. cit. note 1; drivers from idem, *World Economic Outlook 2002* (Washington, DC: 2002), pp. 3, 21.
4. GWP from IMF, op. cit. note 1; drivers from IMF, op. cit. note 3, p. 29.
5. GWP from IMF, op. cit. note 1; drivers from IMF, op. cit. note 3, pp. 9, 38.
6. GWP from IMF, op. cit. note 1; population from U.S. Bureau of the Census, *International Data Base*, electronic database, Suitland, MD, updated 10 October 2002.
7. Census Bureau, op. cit. note 6; GWP from IMF, op. cit. note 1.
8. Jeffrey Sachs, “Rapid Population Growth Saps Development,” *Science*, 19 July 2002, p. 341.
9. OECD, *The Well-being of Nations: The Role of Human and Social Capital* (Paris: 2001), pp. 10–11.
10. Ibid.
11. Ibid.
12. Clifford Cobb, Mark Glickman, and Craig Cheslog, “The Genuine Progress Indicator 2000 Update,” Issue Brief (Oakland, CA: Redefining Progress, December 2001); Mathis Wackernagel, Redefining Progress, e-mail to author, 20 January 2003.
13. Robert Costanza et al., “The Value of the World’s Ecosystem Services and Natural Capital,” *Nature*, 15 May 1997, pp. 253–54.
14. Partha Dasgupta, “Is Contemporary Economic Development Sustainable?” *Ambio*, June 2002, pp. 269–71.
15. Mathis Wackernagel et al., “Tracking the Ecological Overshoot of the Human Economy,” *Proceedings of the National Academy of Sciences*, 9 July 2002, p. 9268. The productivity of “global hectares” is an average based on the productivity of ecosystems used by humans.
16. Wackernagel et al., op. cit. note 15.
17. Ibid.; World Wildlife Fund, U.N. Environment Programme, and Redefining Progress, *Living Planet Report 2002*, at <[www.panda.org/news\\_facts/publications/general/livingplanet/index.cfm](http://www.panda.org/news_facts/publications/general/livingplanet/index.cfm)>, viewed 3 January 2003, p. 21.
18. Peter M. Vitousek et al., “Human Domination of Earth’s Ecosystems,” *Science*, 25 July 1997, pp. 494–95.
19. Mathis Wackernagel, Chad Monfreda, and Diana Deumling, “Ecological Footprint of Nations: November 2002 Update,” Sustainability Issue Brief (Oakland, CA: Redefining Progress, November 2002). Although the average land available to each person globally is 1.9 hectares, the United States is less densely populated, so it has access to more resources, thus allowing 5.3 hectares of resources per person.
20. Calculation based on Wackernagel et al., op. cit. note 19.