## The Midas Century

## Ready or not, its time will come

by William R. Catton, Jr.

Trom the end of the second World War to the end of the 20th century Americans lived in a golden age. The GI Bill made housing, job training, and

university educations available to millions. People began roaming the world at jet speed. Freeways and homes with two- or three- car garages were built. Computers came, and the Internet. Satellites were put into orbit, bringing instant global news images into living rooms, and week-at-a-time weather forecasting. Human

The government assembled by George W. Bush does not understand the important implications of demographic change for the environment and its carrying capacity.

explorers landed on the moon and mechanical ones on Mars. Antibiotics and new vaccines prolonged lives. And average incomes rose to undreamed of heights.

So, as we clumped together in burgeoning cities, our Midas-like achievements shrank the world, lengthened commuting times, fouled the air we breathed, punctured the ozone shield, turned up the greenhouse effect, undermined American railroads, reduced postal service to a delivery arm of the advertising industry, put us all within range of nuclear war-headed missiles, doubled American numbers, more than doubled population elsewhere, widened gaps between rich nations and poor, and accelerated migration.

Enter George W. Bush, ascending to the American presidency at a time when the world needs leaders who can think in ecological terms to cope with effects of a finite biosphere now being subjected to exploitation by an unprecedented human load with gargantuan technological appetites and impacts.

His father came to the White House in 1989 when the world was home to just under 5.2 billion people. The global population then was already double what it had

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been at the end of World War 2, and even with most not yet partaking of American levels of resource consumption there was already worldwide distress about Earth's capacity to accommodate such a load. The elder Bush became president of about 246 million Americans.

Almost four times that many people were added to the planet's human load by the time his son, George W. Bush, assumed the presidency. World population had passed the 6 billion mark shortly before the start of election year 2000, and by the time the younger Bush was sworn in on January 20, 2001, as president of about four

and a half percent of the world's people, just the 12-year increment in the number of Earth's living humans was almost four times what the U.S. population had been when the first Bush took the same oath. Yet one of the new president's first actions, as if population pressure were so remote it was not worth consideration, was to stop U.S. financial support for family planning agencies that countenance abortion.

As choices for cabinet appointments indicated, this second Bush government lacks comprehension of the importance of such demographic changes or their implications for humanity's future. Alien to the vocabularies of America's new leaders are such vital concepts as carrying capacity, sustainability, global environmental change, even per capita environmental impact. Is society a part of, or apart from, an ecosystem? Do the people of the Bush administration even sense how significant is the ecosystem concept? The idea that population growth, by overshooting carrying capacity, damages our future may be inconceivable to them. They have so far shown no comprehension of the fact that an increasingly serious ecological deficit challenges the world. That concept is not part of their vocabulary, yet ecological deficits happen when species populations increase to the point of using some vital resource faster than it can be supplied by ecosystem processes. In the

exuberance arising from their predecessors and Congress having put fiscal deficits behind us, the Bush team are preoccupied with projected federal fiscal surpluses, with which they seek to legitimize a huge and still controversial tax cut. That cut is rationalized as a means of restimulating a faltering economy, regardless of what has already been done by that economy to a finite biosphere. Is society the servant of an economy? Or is an economy a servant of society? Can either be independent of the global ecosystem?

America prides itself on having led the world in many ways. One of the better instances of our country's world leadership, respected around the world, was our 1872 invention of an institution embodying the very concept of sustainable use of an environment. National parks are that institution — areas set aside from economic exploitation, to be managed with the aim of protecting "the scenery and the natural and historic objects and the wild life therein" while providing for the enjoyment of them "in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Mistakes have occurred in practice, but this has not prevented scores of other countries from embracing the fundamental idea and seeking to emulate the U.S. National Park Service.

The second Bush administration's commitment to other goals seems to leave it flagrantly unmindful of such environmental values. One vivid indicator: within its first 100 days the Bush Administration was responding to a growing industry wish list for weaker environmental standards — even in the nation's (and the world's) original national park, reflecting disregard for the sanctity of a place dedicated by Act of Congress and ratified by better than a century of tradition. The phrase "leave them unimpaired" was an early and prescient expression of the issue of sustainability. Sustainability is the key element in today's conception of an ecosystem's carrying capacity. Carrying capacity means the load an ecosystem can endure indefinitely, not just briefly. Proposals by the second Bush administration for "meeting the nation's energy needs" reveal little if any understanding that sustainability can be an issue.

In the National Parks, as on other tracts of land, it turns out there can be serious damage from overuse or misuse. The national park version of the sustainability issue thus serves as a symbol of the key dilemma of a world of 6 billion seeking to universalize an industrially ravenous lifestyle. But it is also more than symbolic. People increasingly need the respite these special places provide from the pressures of a crowded and chaotic life. Accordingly, spokespersons for the Wilderness Society, the National Parks Conservation Association, and the Greater Yellowstone Coalition deplored the move by the new leaders in Washington to abandon that "preserve them unimpaired" commitment of the National Park Service. Shortly before the previous administration left office, the NPS had at last responded to escalating snowmobile-related problems in Yellowstone, the world's

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first national park, and to concerns expressed in 22 public hearings and tens of thousands of citizen comments critical of noise, air pollution, and disturbance of wildlife by these machines, by announcing that admission of snowmobiles to Yellowstone would be "phased out." Future winter access to the park would instead use "safer, quieter and less-polluting" snowcoaches, to be piloted by drivers trained to respect wildlife and to share with passengers their knowledge about the park.

At this writing it remains to be seen whether the NPS will be allowed to serve the public interest or required to be subservient to the interest of a particular industry. Whatever the local outcome, on a larger stage the question is: Will future Americans still take pride if their nation's leaders take the world down the slippery slope of ecological excess, culminating in such biosphere damage that even a greatly reduced world population will face impoverished lives?

The U.S. has the third largest population among the world's nations, a rather distant third at that. But we rank first in the world in generating some ecologically destructive by-products of what we define as prosperity. We used to rank fourth in population, when the Soviet Union was in third place. Its break-up left its largest republic, Russia, as a nation somewhat less populous than ourselves That political change moved us up a rank without having diminished the global human load. Now,

though, the only two countries "ahead" of us in population are China and India. India's numbers have very recently reached one billion. As if that alone were not appalling enough, China's population is roughly equal to that of India plus the United States. What would it do to the world if per capita resource consumption and per capita effluent emission in those two countries were to reach the American level?

George W. Bush presides over a nation about twice as populous as it was when he was born, but with only about four and a half percent of the world's people. By means of their country's prodigal economy those four and a half percent emit more than five times as much climate-changing CO<sup>2</sup> per capita as the world average per capita emission. Scientists tell us present accumulations of greenhouse gases are already increasing the frequency and severity of storms, have started raising sea level, will alter growing seasons, and disruptively shift the locations of arable regions. Dare we, the planet's inhabitants, continue increasing our aggregate quantity of fossil fuel combustion? George W. Bush seems to think so. Having first scoffed at California's recent electricity woes, he subsequently latched onto

them as a means of justifying the proposal to drill for oil in the Arctic National Wildlife Refuge. Difficulties once again labeled "the energy crisis" may also serve as a rationale for rescinding National Monument status accorded by Bush's predecessor to lands now coveted for oil and gas exploration.

European leaders voiced sorrow and anger when the second President Bush announced U.S. abandonment of the Kyoto treaty on global warming. The new administration was just over two months old. His insistence that a healthy American economy was more important than global climate stability was front page news across Europe. The Kyoto agreement had called for industrial countries to reduce their emissions of

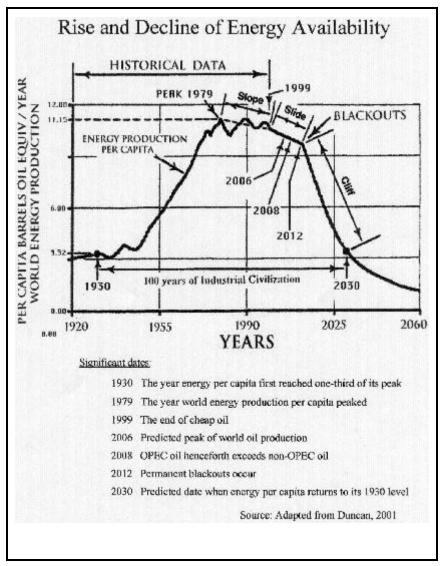


Figure 1.

greenhouse gases to 5.2 percent below 1990 levels by 2012. After meeting with the German Chancellor, Gerhard Schröder, Bush "explained" the abandonment by declaring, "We will not do anything that harms our economy, because first things first are the people who live in America."

Ostensibly, what the administration objects to is the fact that Kyoto exempted the non-industrial countries from emission limits. How could he imagine, though, that U.S. abandonment of the Kyoto agreement could possibly help persuade non-industrial nations to accept limits, especially when the rebuff represents American insistence on "not doing anything that harms our economy"?

He seems unable to recognize the perils his policies will deepen. As world population marches on toward seven billion, with some "developing countries" coming closer to practicing the prodigal ways of "developed" ones like us, the course President Bush plans to follow will hasten the global approach to catastrophe. Life had a golden glow as we ascended the slope on the left side of Figure 1, but as Richard C. Duncan explained in a keynote presentation to the 2000 meeting of the Geological Society of America, we are closer to falling off the cliff on the right than most people realize. President Bush and his colleagues seem unware that any such downslope is out there.

It was alleged during the 2000 election campaign that George W. Bush was averse to reading books. Acceding to his reputed preference for brief position papers, one could wish that he might at least read and ponder the Farewell Address given by an esteemed Republican predecessor, Dwight Eisenhower. Although it was the address that implanted in the American

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political vocabulary the phrase "military-industrial complex" (as the ex-general warned future Congresses and electorates to beware of its "acquisition of unwarranted influence, whether sought or unsought"), that January 1961 speech contained another, equally prophetic warning:

We — you and I, and our government — must avoid ... plundering, for our own ease and convenience, the precious resources of tomorrow. We cannot mortgage the material assets of our grandchildren without risking the loss also of their political and spiritual heritage.

The second Bush administration seems bent on incurring the unseen consequences of just such plundering of tomorrow's resources.

If it were possible to persuade President Bush to

read at least a pair of mind-changing books, perhaps he should begin with one written half a century ago by the grandson of Charles Darwin. According to Charles Galton Darwin's *The Next Million Years*, "The central feature of human history must always be the pressure of population." Leaders who understood that might understand many of the ills of our time. "There will be," he said, "a fraction of humanity, a starving margin, who have got to die," as a result of numbers exceeding carrying capacity. Deaths would result from intermittent famines, diseases caused by malnutrition, or warfare in quest of other countries' resources, but no nation, C. G. Darwin foresaw, will

tolerate living in contact with the sufferings of its own starving margin, if it is in any way possible to relieve them. The relief will all too frequently involve bad agricultural practice which will ruin the land in the long run, but [as early actions of the new Bush regime seem to confirm] short-term necessity will always prevail against long-term prudence.

To become convinced of the immanence of that downward slope in Figure 1, the other book George W. Bush, a former Texas oil company executive, should carefully read and discuss with his Cabinet, especially his Energy Secretary, is petroleum geologist Walter Youngquist's (1997) GeoDestinies, subtitled: The Inevitable Control of Earth Resources over Nations and Individuals. Because a liquid fuel can be so convenient, oil has become the key energy basis for modern economies. But Bush's eagerness to encourage more oil drilling on American land might be diminished if he read (p.179) that the U.S. is already "the most thoroughly oil-explored and drilled nation in the world. To the time of writing "about 4,600,000 wells for oil and gas have been drilled in the world. Of this number approximately 3,400,000 or about 74 percent have been drilled in the United States." As a result there was a truly awesome contrast in "production" capabilities between the U.S. and elsewhere. In 1992, the United States extracted 2.6 billion barrels of oil from 602,000 wells. while Saudi Arabia drew 2.9 billion barrels from only 1.400 wells.

As Youngquist reminds us on p.183, we drill deeper than we used to and find less oil. "In the United States during the early 1930s, about 250 barrels of recoverable

oil were found per foot drilled. By the 1950s, this figure had decreased to about 40 barrels a foot, and by 1981, it was down to 6.9 barrels ..." He says it seems certain that the U.S. will never again be able to extract from its own territory enough oil to supply its own oil needs. "Imported oil has become a permanent material and economic fact of life, and the U.S. no longer controls the price."

Is there any possibility that the second Bush administration will strive to cure our addiction to high-energy living, or will it persist in reinforcing that addiction? "Reason and clear recognition of reality must prevail," says Youngquist (p.448), if our society is to survive. "The political leadership especially must be able to correctly differentiate between the possible and the absurd. This is particularly important when it comes to decisions relative to the foundations of civilization — the energy and mineral resources upon which everything else depends." And the longer we ignore the major effects of our fossil fuel habit, such as global climate change, the higher will rise the costs it must inflict upon the world, according to George Woodwell, the ecologist who heads the Woods Hole Research Center in Massachusetts.

The geologist Youngquist also pointed out, in an article in the March 1999 issue of Population and *Environment*, that determining the precise date when our slide down that slippery slope of diminishing energy availability will have begun is less important than recognizing how drastically different life will be going down than coming up. Rather than expending effort "debating the date of the peak" we must recognize that "the beginning of an irreversible permanent time beyond petroleum is coming into view. One fact makes this crystal clear. The world now uses about 26 billion barrels of oil a year, but, in new field discoveries we are finding less than six billion. The world is going out of the oil business. Then what?" One reason for serious concern is that, despite all progress, human beings who must face the onset of that downward slide retain a capacity for "inhuman" animosities. Golden Ages have had sad aftermaths.

Perhaps the approach taken by the second Bush administration will simply epitomize the myopic opportunism of fabled King Midas. We members of the species called *Homo sapiens* continue to share with all creatures the prodigal tendency to proliferate too much. It has led us, like that king (who, together with his

subjects, paid a heavy price), into the temptations of this Midas century, the end of which now looms just over the horizon.

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