

Can We Put a Price on Nature?

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by H. Sterling Burnett

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Nature provides a variety of services to mankind. Forests and wetlands, for example, filter pollutants, cleaning the water. Weathering, microbes, and various plants and insects create and enrich the soil. The world's forests and oceans work as the lungs of the earth, taking in carbon dioxide and emitting oxygen. Undeveloped land provides a variety of recreational opportunities, from hiking, camping and off-road biking to hunting and fishing.

Executive Summary

Intact ecosystems and the services they provide are considered by many people to be inherently valuable or priceless. Relatively recently, some environmentalists and economists began to argue that dollar values could be placed on the services nature provides, leading to wiser development decisions. However, there are a host of problems with efforts to put a price on nature.

Few estimates of the value of ecosystem services or goods actually exist. In 1997, in one of the most influential and widely cited papers, economist Robert Costanza estimated the current economic value of 17 ecosystem services for 16 biomes, or geographically and biologically distinct environments, based on published studies and a few original calculations. Among the biomes and services valued, he found:

- Estuaries provide \$4.1 trillion worth of services by reducing the damage caused by tropical storms, replenishing nutrients, providing habitat and offering recreational opportunities (among other services).
- Tropical forests play a valuable and significant role in climate regulation, provide raw materials, prevent soil erosion and serve as a store of genetic material worth \$3.8 trillion annually.
- Tidal marshes also reduce damage from floods and storms, provide critical waste treatment services, limited food production, natural habitat and recreational opportunities, for a value of \$1.65 trillion annually.
- The value of the ecosystem services provided by the entire biosphere (most of which is outside the market) is in the range of US\$16-54 trillion per year, with an average of US\$33 trillion per year.



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However, there are difficulties valuing global (and even local) ecosystem services, in part because they are public goods and thus lack a market-revealed price. Critics argue that public funding of efforts to value ecosystem services is not justified now, nor is it likely to be in the future. They question, for instance, the millions of dollars flowing to researchers attempting to define the scope of the project and the valuations produced.

Certain parts of the ecosystem such as insects provide vital ecological services, including pollination — although wind actually pollinates most cereal crops. Some argue insect pollinators are essentially as ubiquitous as the wind. Where there is scarcity, however, markets, have arisen without the need to estimate the value of ecosystem services. For example:

- Bees provide services for which orchard owners and farmers pay beekeepers an estimated \$150 million per year.
- Dung beetles provided \$380 million in services to ranchers by burying cow manure in pastures, yet no one pays for dung beetles, and there is no scarcity.

Many ecosystem services are also likely to be hard to price— for instance, the arguably beneficial effects on climate and agriculture (minus the deleterious impacts on health) when atmospheric dust from the African Sahel drifts across the Atlantic. And even if you could put a price on an ecosystem service, figuring out who has a legitimate right to sell it means picking winners and losers. Some factions might even view those attempts with suspicion, therefore undermining support for the very environmental benefits one hopes to foster.

Defining ecosystems in general, or specifically, is difficult. It is equally difficult to establish a sound economic baseline for the benefits nature provides to mankind. Where ecological services need to be monetized, they likely will be. Where monetization is unlikely or virtually impossible, decision makers probably don't need to spend time making these kinds of cost-benefit calculations.

About the Author

H. Sterling Burnett is a senior fellow with the National Center for Policy Analysis. While he works on a number of issues, he specializes in issues involving environmental and energy policy. He also serves as an adviser to the American Legislative Exchange Council Energy, Environment, Natural Resources and Agriculture Task Force (1996 - Present); a senior fellow with the Texas Public Policy Foundation (2005 - Present); and a contributing editor to *Environment & Climate News* (2005 – Present).

Dr. Burnett has been published in *Ethics*, *Environmental Ethics*, *Environmental Values*, *The Review of Metaphysics*, *International Studies in Philosophy*, *The World and I*, *USA Today* and the *Washington Post*. Dr. Burnett received a Ph.D. in Applied Philosophy from Bowling Green State University in 2001.

Introduction

Nature provides a variety of services to mankind. Forests and wetlands, for example, filter pollutants, cleaning the water. Weathering, microbes, and various plants and insects create and enrich the soil. The world's forests and oceans work as the lungs of the earth, taking in carbon dioxide and emitting oxygen. Undeveloped land provides a variety of recreational opportunities, from hiking, camping and off-road biking to hunting and fishing. Wild animals and plants nourish agricultural crops. Various insects pollinate plants. All of these processes take place within ecosystems — communities of living organisms interacting within the organic and inorganic (nonbiological) environment.

In theory, intact ecosystems and the services they provide are inherently valuable or priceless. In practice, absent a market value, ecosystem services are given short shrift compared to development opportunities. Relatively recently, some environmentalists and economists began to argue that dollar values could be placed on the services nature provides, fostering wiser development decisions. They believe that allowing markets to develop around valuation of and trade in species, habitats and their interrelations would provide more environmental protection and promotion than the current system.

However, there are a host of problems with efforts to put a price on nature.

Pricing Ecosystem Services

Economists and ecologists who promote the valuation of ecosystem services argue that bringing them into the market would help people realize the full costs and benefits of production and consumption decisions. Most argue that ecosystem services are vastly undervalued, believing that if their value were assessed, the world's governments would commit more resources to environmental protection, and undertake less intensive or

“There is no market price for most ecosystem services, making them difficult to value.”

disruptive human development.¹

Few estimates of the value of ecosystem services or goods actually exist. Instead, published research has focused on methodologies: developing the concept and evaluating background conditions, models and differing approaches, rather than valuing whole ecosystems.²

An Estimate of the Value of Ecosystem Services. In 1997, in one of the most influential and widely cited papers, economist Robert

Costanza estimated the current economic value of 17 ecosystem services for 16 biomes, or geographically and biologically distinct environments, based on published studies and a few original calculations.³ Among the biomes and services valued, he found:

- Estuaries provide \$4.1 trillion worth of services by reducing the damage caused by tropical storms, replenishing nutrients, providing habitat and offering recreational opportunities (among other services).
- Tropical forests play a valuable and significant role in climate regulation, provide raw materials, prevent soil erosion, and serve as a store of genetic material worth \$3.8 trillion annually.
- Tidal marshes also reduce damage from floods and storms, provide critical waste treatment services, limited food production, natural habitat and recreational opportunities, for a value of \$1.65 trillion annually.

Other biomes include deserts, tundra, open ocean, grasslands and so forth, each of which provides free services humans would otherwise have to recreate artificially. Overall, according to Costanza:

- The value of the ecosystem services provided by the entire biosphere (most of which is outside the market) is in the range of US\$16-54 trillion per year, with an

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average of US\$33 trillion per year.

- By comparison, Costanza's calculation at the time almost doubled the world's annual gross domestic product of approximately \$18 trillion.

On the left, proponents of estimating monetary values for ecosystem services agree with Costanza that:⁴

Old-style protection of nature for its own sake has badly failed to stop the destruction of habitats and the dwindling of species. It has failed largely because philosophical and scientific arguments rarely trump profits and the promise of jobs. And conservationists can't usually put enough money on the table to meet commercial interests on their own terms. Pointing out the marketplace value of ecosystem services was initially just a way to remind people what was being lost in the process — benefits like flood control, water filtration, carbon sequestration, and species habitat. Then it dawned on someone that, by making it possible for people to buy and sell these services, we could save the world and turn a profit at the same time.

Other environmentalists object to this approach.

Is the Environment Inherently Valuable? Some environmentalists have argued that ecosystems, or their constituent parts, have intrinsic value that should not be monetized. They believe that putting a market value on ecosystem services makes it easier to justify more intensive human use.

Kent H. Redford and William M. Adams have catalogued a host of arguments against the valuation of ecosystems.⁵ Richard Connif explains their view that:⁶

Traditional conservationists sought to protect forests and other landscapes primarily for their intrinsic value, says Redford. But those values are likely to carry less weight when even conservationists think first in economic terms. Many ecosystem services are also likely to be hard to price — for instance, the arguably beneficial effects on climate and agriculture (minus the deleterious impacts on health) when atmospheric dust from the African Sahel drifts across the Atlantic.

Redford and Adams also question who would have the right to own or buy and sell such services, or who would deserve compensation if those services are impaired.

As Connif says:

And even if you can put a price on an ecosystem service, Redford and Adams argue, figuring out who has a legitimate right to sell it means picking winners and losers. In developing countries, indigenous communities may lack the documentation or the political clout to assert their ownership. Payment schemes also risk creating perverse incentives, Redford and Adams warn. If the system pays landowners to bank carbon, they may plant non-native species, or genetically "improved" trees, to bank carbon faster. Or they may discourage natural phenomena that happen to be good for biodiversity, but bad for people, including such ecosystem *disservices* as fire, drought, disease, or flood.

These actions could create new groups of people suspicious of government, ultimately undermining environmental protection.

Who will establish the prices and markets? Some environmentalists fear that inequalities and inequities in the socio-political system will re-occur as pricing spreads to nonmarket ecosystem services.⁷ Thus, pricing those services is likely to be counterproductive for biodiversity conservation and

equity of access to ecosystem services.

Economic Objections to Pricing Ecosystem Services

Many economists find difficulties in valuing ecosystem services, in part because the services are public goods and thus lack market-revealed prices. Commercial markets do not trade in public goods because no one can be excluded from using them, and one person’s use does not diminish the amount available to others. For example, the air is there for all to breathe; bees, other insects and birds worked their magic long before cities arose; when soil is formed, everyone benefits.

Problem: The Lack of Knowledge. Is it even possible to value ecosystem services as a whole — as opposed to a select few benefits that flow from particular areas? Consider the knowledge problem. We don’t know every species, every niche or role each species occupies, every geographic and climatological feature, and a host of other factors that create valuable ecosystem services. Nor will we ever.

It can be argued that ecosystems don’t really exist, and that, even if they do, humanity remains woefully ignorant of their intricate workings. Most ecologists and many environmental economists describe ecosystems as if they were living organisms that

maintain a state of relative balance or equilibrium. But nothing could be further from the truth. As noted biologist Daniel Botkin has pointed out, both large- and small-scale ecosystems, habitats, atmospheric conditions and species are constantly changing over time and place, both influencing and being influenced by the other factors. Thus, the current value placed on a particular ecological service may not reflect its value over time.⁸

Allen K. Fitzsimmons, formerly of the U.S. Department

“Some argue ecosystems are mental constructs rather than real entities.”

of the Interior, argues that ecosystems are mental constructs rather than real entities. Nature provides services, but defining a specific ecosystem results in nothing more than a geographic free-for-all, as researchers focus on the location, shape and size of the geographic unit using whatever variables and means suit the project at hand. This is why federal agencies strongly disagree with each other over how a map of the nation’s ecosystems should look.⁹

Rather than ecosystems providing valuable services, Fitzsimmons argues that nature provides benefits or services to

humans simply through “the serendipitous byproducts of individual living organisms seeking to survive and nonliving things following fundamental laws of physics and chemistry.” For instance, pollination benefits humans, but ecosystems do not pollinate anything. Rather, plants are pollinated when individual insects, birds and other biota move from flower to flower in the normal pursuit of food.

Fitzsimmons also argues that if society cannot understand the make-up of an ecosystem and the processes that create the services to be valued, it is hard to establish accurate prices because, in fact, humans often intervene in a particular ecosystem and still receive its services. Humans have altered the background environment in ways that enhanced the natural productivity of land, or improved the prospects of some species at the expense of others. Other human actions have reduced the services nature provides and, in extreme cases, so altered local environments that manufactured replacements have almost entirely supplanted ecosystem services.

For instance, urban and suburban development has displaced ecosystems. As a result, large sewage treatment facilities are required to return waste water to drinkability. Natural systems either cannot or do not exist locally to produce the volume of drinking water needed. Ranches, feedlots and

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commercial agriculture have displaced native grasslands to provide enough food for large, concentrated populations — hunting, gathering and small-scale agriculture no longer suffice to meet the nutritional needs of mankind. Though bees, for example, are still needed for pollination, growers pay beekeepers to bring their hives to locations where native populations are insufficient.

Finally, Fitzsimmons says it might be worthwhile to value a limited number of scarce services but, in practice, those services are impossible to price — oxygen in the air being a prime example.

Problem: Use of Survey Data to Establish Values.

Some economists have criticized environmental economists' use of "willingness to pay" (WTP) surveys to calculate the social benefits of ecosystem services. Economists use WTP to calculate a value by asking survey participants how much they would be willing to pay for a particular good or service. However, these surveys regularly produce widely differing estimates.

Alternatively, environmental economists could use willingness to accept (WTA) surveys to estimate value. WTA surveys ask participants to imagine they own a good or service, and estimate how much they would be willing to accept for the sale of that good. Typically,

economic theory assumes that when income effects are small, the gap between WTP and WTA will be negligible. In practice, however, economists generally find WTA values greatly exceed WTP values. For instance, what a person will pay for a car of the same make and model and vintage as the one he currently owns is equal to the market price, or less. However, when that person owns a particular car, he only values the car at market prices upon the decision to sell; otherwise, the vehicle is worth more to the owner than what the

“Surveys of ‘willingness to pay’ for goods or services produce widely differing estimates.”

buyer is willing to pay.

People value a good or service more if they own it. They even value their very ownership of an item. For example, one's house may have a market value but most people would feel violated or robbed if they found their house inhabited by strangers even if there was pile of money outside equal to the market value of the home and its belongings.

Problem: Choices Have Marginal Effects, Rather Than All or Nothing Consequences. Willingness to pay assumes other factors that influence individual decisions remain unchanged,

according to environmental economist V. Kerry Smith.¹⁰ But, if those other factors change, people have a different willingness to pay. Thus, the whole is not necessarily the sum of its parts, and willingness to pay estimates are not necessarily additive.

Smith says that Constanza defined a situation where society's willingness to pay is expressed as payments to maintain the 17 ecosystems in a "take it or leave it" fashion, implying the choice is all or nothing. But choices about potential modifications of ecosystems are marginal, not all or nothing. Except in extreme cases, where a single change causes all life to collapse, the choice is between the marginal value of the benefits from the change, weighed against the marginal costs of such a change.

Problem: Similar Ecosystems Are Imperfect Substitutes for Each Other. Finally, Smith points out, accurate WTP calculations depend upon the availability of substitutes, but Costanza assumes that all areas within a particular ecosystem are perfect substitutes for one another, and that similar ecosystems (deserts, tropical forests and so forth) widely dispersed around the world are substitutable in value. Neither assumption is correct. One area within an ecosystem, for instance, could contain unique features that make it the only suitable habitat for a particular

kind of species, while other areas within the same ecosystem could not sustain the species and thus are not good substitutes. No two ecosystems are alike in every respect. For example, deserts around the globe contain different geographic features, with resulting differences in biodiversity and even rainfall patterns.

Problem: Stated versus Revealed Preferences. Smith identifies yet another problem, expanded upon by economist R. David Simpson of the U.S. Environmental Protection Agency, involving the use by environmental economists of stated preferences rather than revealed preferences.¹¹ In stated preference studies, economists ask participants how much they would pay for a particular good or service. By contrast, in revealed preference studies, economists look at how much people actually do spend on these goods and services. Participants in stated preference surveys could treat them as opportunities to buy good karma or moral satisfaction, without actually having to spend the money — there are no actual budget constraints when simply stating ones preference. Yet, as Simpson points out, “economists often distinguish their discipline from other social science approaches by noting that they base their analyses on what people actually *do* rather than on . . . (what) people *say* motivate their actions.”

Problem: Publication Bias and Researcher Bias. Simpson notes other methodological or institutional problems in attempts to value ecosystem services: publication bias and researcher bias.

Academia’s “publish or perish” tradition still reigns. If reputable peer reviewed journals do not regularly publish their work, college professors typically don’t get tenure. But such journals are far more likely to publish a study that finds statistically significant results. Thus, it seems unlikely that a

“The value of an ecosystem varies by its proximity to humans.”

large numbers of economists would devote scarce time and other resources to write up results they know are likely to be rejected. As a result, they might prescreen research projects, moving forward with only those that yield significant results.

On the other hand, researchers might find and report strong positive results because they firmly believe that such results are correct. Simpson provides an example. A researcher believes the services performed by a forest are of considerable value. Yet testing shows the hypothesis is incorrect — the forest is much less valuable than

the researcher thought. The researcher could either admit his theory was wrong or assume his methodology was flawed — in which case, he starts over in order to get the “right” result.

Problem: Value Varies by Location. Simpson also notes the problem of benefit transfer. If a particular ecosystem in one location provided all the same services as that system does in another location, the value could vary greatly based simply on their proximity to human population centers. Human activities in one location could impact such an ecosystem, causing a significant loss of function, but a similar functional loss in a less populated location would not create the same loss of market value. If an ecosystem collapses, and no one is around to notice, and it has no significant negative externalities, does it really matter?

Problem: Ecosystems May Not Be Worth Valuing. Reasons to believe that spending public resources on attempts to value ecosystem services are not worthwhile flow from the nature of the ecosystems themselves.

Take ocean fisheries as an example. Fisheries are typically managed in one of three ways: anarchy, government regulation and establishing property rights. Historically, most of the world’s resources fell under the regime of anarchy, which made sense when technology was primitive and human populations were small. If fish

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are able to reproduce in numbers that exceed the previous year's losses from natural predation, disease and fishing, they will replenish themselves. But the world changed — populations grew, technologies improved and governments developed the concept of property rights, which proved critical in both exploiting and damaging natural resources.

Most species need no human management at all. Where there is no market demand for a species, they are not subject to depletion through over-harvesting. For example, almost all species of insect, vermin and songbirds do not require conservation. Other examples include pigeons, feral pigs, opossums and coyotes. These animals are abundant and do not depend for their continued survival on either government protection or private ownership.

The vast majority of ocean species fall into this category as well. In American waters, only about 130 of 959 fish stocks are commercially valuable. The other species fall under an anarchic system. Anarchic management only becomes a problem when fishers exploit underused noncommercial stocks; disrupt predator/prey ratios; kill large numbers of unregulated fish in the course of commercial fishing; and when fishing technologies (such as drag nets) harm the marine environment.

Many species of animal reproduce in sufficient numbers to replace themselves, despite

human influence. For example, freshwater carp sells very well in many parts of the United States, especially in low-income areas. However, the species is so plentiful that many anglers consider them a nuisance. Nutria are another good example. This beaver-like rodent thrives throughout the Southeastern United States, and although people occasionally eat them or hunt them for their pelts, nutria are over-populating many rural areas. Neither carp nor nutria need government regulation or private ownership.

“Many species aren't valuable to humans.”

For species such as these, and for watersheds, deserts and forests that are not stressed or threatened with extinction, there is little need to spend public funds estimating their value.

Philosopher Mark Sagoff has furthered this line of argument.¹² Because prices result from scarcity, when available supplies satisfy total demand, there is no price. Sagoff argues that markets correctly place negligible prices on natural capital and ecosystem services for water, timber, pollination and biodiversity.

For instance, the natural hydrologic cycle provides vastly

more freshwater than humanity needs. Humans use only about one-fiftieth of the water that precipitates over land; thus, vast quantities of water fall on the land for free. (However, Sagoff fails to acknowledge that water has a price because of local scarcities and the expense of moving water around.)

The same is true for forests. Agricultural and silvicultural productivity has increased so much that vast amounts of land have actually reverted to nature, and forests are expanding worldwide.¹³

Certainly insects provide vital ecological services, including pollination — although wind actually pollinates most cereal crops. In other words, wheat farmers basically get all of the wind they need for free. Sagoff argues insect pollinators are essentially as ubiquitous as the wind. Where there is scarcity, however, markets have arisen without the need to estimate the value of ecosystem services. Bees provide services for which U.S. orchard owners and farmers pay beekeepers an estimated \$150 million per year.¹⁴ Dung beetles provided \$380 million in services to ranchers by burying cow manure in pastures.¹⁵ Yet no one pays for dung beetles, and there is no scarcity. Rather, without government intervention or academic accounting, ranchers have created “dung beetle Heaven” simply by populating their range with cattle. The beetles are “paid” copious quantities of cow manure for

their work, just as pollinating insects are “paid” for their efforts with nectar from the flowers of fruits, vegetables and nuts planted by farmers.

Finally, Sagoff points out that “No one has suggested an economic application...for any of the thousand species in the USA listed as threatened.” The U.S. Fish and Wildlife Service lists 1,251 species as endangered or threatened with extinction, but no one could claim a significant economic value for many of many of them.¹⁶ What is the economic use for Peck’s cave amphipod, the Delhi Sands fly or the rock gnome lichen?¹⁷ If they disappeared, the world would be poorer in some spiritual or aesthetic sense perhaps, but their passing would go largely unnoticed.

Conclusion

Defining ecosystems in general, or specifically, is difficult. It is equally difficult to establish a sound economic baseline for the benefits nature provides to mankind. Where ecological services need to be monetized, they likely will be. Where monetization is unlikely or virtually impossible, decision makers probably don’t need to spend time making these kinds of cost benefit calculations. Some factions might even view those attempts with suspicion, therefore undermining support for the very environmental benefits one hopes to foster.

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Endnotes

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The NCPA is a nonprofit, nonpartisan organization established in 1983. Its aim is to examine public policies in areas that have a significant impact on the lives of all Americans — retirement, health care, education, taxes, the economy, the environment — and to propose innovative, market-driven solutions. The NCPA seeks to unleash the power of ideas for positive change by identifying, encouraging and aggressively marketing the best scholarly research.

Health Care Policy.

The NCPA is probably best known for developing the concept of Health Savings Accounts (HSAs), previously known as Medical Savings Accounts (MSAs). NCPA President John C. Goodman is widely acknowledged (*Wall Street Journal*, WebMD and the *National Journal*) as the “Father of HSAs.” NCPA research, public education and briefings for members of Congress and the White House staff helped lead Congress to approve a pilot MSA program for small businesses and the self-employed in 1996 and to vote in 1997 to allow Medicare beneficiaries to have MSAs. In 2003, as part of Medicare reform, Congress and the President made HSAs available to all nonseniors, potentially revolutionizing the entire health care industry. HSAs now are potentially available to 250 million nonelderly Americans.

The NCPA outlined the concept of using federal tax credits to encourage private health insurance and helped formulate bipartisan proposals in both the Senate and the House. The NCPA and BlueCross BlueShield of Texas developed a plan to use money that federal, state and local governments now spend on indigent health care to help the poor purchase health insurance. The SPN Medicaid Exchange, an initiative of the NCPA for the State Policy Network, is identifying and sharing the best ideas for health care reform with researchers and policymakers in every state.

**NCPA President
John C. Goodman is called
the “Father of HSAs” by
The Wall Street Journal, WebMD
and the *National Journal*.**

Taxes & Economic Growth.

The NCPA helped shape the pro-growth approach to tax policy during the 1990s. A package of tax cuts designed by the NCPA and the U.S. Chamber of Commerce in 1991 became the core of the Contract with America in 1994. Three of the five proposals (capital gains tax cut, Roth IRA and eliminating the Social Security earnings penalty) became law. A fourth proposal — rolling back the tax on Social Security benefits — passed the House of Representatives in summer 2002. The NCPA’s proposal for an across-the-board tax cut became the centerpiece of President Bush’s tax cut proposals.

NCPA research demonstrates the benefits of shifting the tax burden on work and productive investment to consumption. An NCPA study by Boston University economist Laurence Kotlikoff analyzed three versions of a consumption tax: a flat tax, a value-added tax and a national sales tax. Based on this work, Dr. Goodman wrote a full-page editorial for *Forbes* (“A Kinder, Gentler Flat Tax”) advocating a version of the flat tax that is both progressive and fair.

A major NCPA study, “Wealth, Inheritance and the Estate Tax,” completely undermines the claim by proponents of the estate tax that it prevents the concentration of wealth in the hands of financial dynasties. Senate Majority Leader Bill Frist (R-TN) and Senator Jon Kyl (R-AZ) distributed a letter to their colleagues about the study. The NCPA recently won the Templeton Freedom Award for its study and report on Free Market Solutions. The report outlines an approach called Enterprise Programs that creates job opportunities for those who face the greatest challenges to employment.

Retirement Reform.

With a grant from the NCPA, economists at Texas A&M University developed a model to evaluate the future of Social Security and Medicare, working under the direction of Thomas R. Saving, who for years was one of two private-sector trustees of Social Security and Medicare.

The NCPA study, “Ten Steps to Baby Boomer Retirement,” shows that as 77 million baby boomers begin to retire, the nation’s institutions are totally unprepared. Promises made under Social Security, Medicare and Medicaid are inadequately funded. State and local institutions are not doing better — millions of government workers are discovering that their pensions are under-funded and local governments are retrenching on post-retirement health care promises.

Pension Reform.

Pension reforms signed into law include ideas to improve 401(k)s developed and proposed by the NCPA and the Brookings Institution. Among the NCPA/Brookings 401(k) reforms are automatic enrollment of employees into companies’ 401(k) plans, automatic contribution rate increases so that workers’ contributions grow with their wages, and better default investment options for workers who do not make an investment choice.

The NCPA's online Social Security calculator allows visitors to discover their expected taxes and benefits and how much they would have accumulated had their taxes been invested privately.

Environment & Energy.

The NCPA's E-Team is one of the largest collections of energy and environmental policy experts and scientists who believe that sound science, economic prosperity and protecting the environment are compatible. The team seeks to correct misinformation and promote sensible solutions to energy and environment problems. A pathbreaking 2001 NCPA study showed that the costs of the Kyoto agreement to reduce carbon emissions in developed countries would far exceed any benefits.

Educating the next generation.

The NCPA's Debate Central is the most comprehensive online site for free information for 400,000 U.S. high school debaters. In 2006, the site drew more than one million hits per month. Debate Central received the prestigious Templeton Freedom Prize for Student Outreach.

Promoting Ideas.

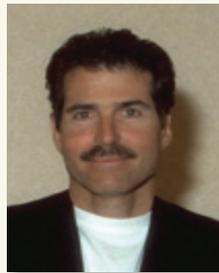
NCPA studies, ideas and experts are quoted frequently in news stories nationwide. Columns written by NCPA scholars appear regularly in national publications such as the *Wall Street Journal*, the *Washington Times*, *USA Today* and many other major-market daily newspapers, as well as on radio talk shows, on television public affairs programs, and in public policy newsletters. According to media figures from *BurrellesLuce*, more than 900,000 people daily read or hear about NCPA ideas and activities somewhere in the United States.

What Others Say About the NCPA



"The NCPA generates more analysis per dollar than any think tank in the country. It does an amazingly good job of going out and finding the right things and talking about them in intelligent ways."

Newt Gingrich, former Speaker of the U.S. House of Representatives



"We know what works. It's what the NCPA talks about: limited government, economic freedom; things like Health Savings Accounts. These things work, allowing people choices. We've seen how this created America."

John Stossel,
host of "Stossel," Fox Business Network



"I don't know of any organization in America that produces better ideas with less money than the NCPA."

Phil Gramm,
former U.S. Senator



"Thank you . . . for advocating such radical causes as balanced budgets, limited government and tax reform, and to be able to try and bring power back to the people."

Tommy Thompson,
former Secretary of Health and Human Services