

WINTER 2012 | VOL. 13, NO. 2

Trust

The Pew Charitable Trusts



NORTHERN EXPOSURE

USING SCIENCE TO GUIDE MAN'S EXPANDING
FOOTPRINT IN THE ARCTIC

ALSO

SEEKING A BETTER PRESCRIPTION FOR DRUG SAFETY
RISING RESTRICTIONS ON RELIGION



Mutual Dependence

We all marked a major milestone this past fall when the world's population surpassed 7 billion. That is nearly triple the number of people on Earth when The Pew Charitable Trusts began more than six decades ago and the telephone, television, and commercial air travel were not yet common fixtures of American life. As our population has grown, so too has our feeling that the world is getting smaller. Advances in transportation and communication have shrunk space and time so that goods can be delivered overnight to nearly any corner of the globe, conditions in financial markets oceans apart reverberate across time zones in a single day, and we expect news about events taking place half a world away as instantaneously as updates from friends and family. With this greater connectivity comes the realization that our actions can significantly impact one another and the planet we share. This poses serious challenges, but also offers opportunities—if we are willing to band together—to solve today's most challenging problems.

Nowhere is the need for a collaborative solution more evident than in the Arctic. Climate change is warming this pristine area at twice the rate of the rest of the planet. The Arctic's ice cap is melting, which is fundamentally changing its ecosystems and opening up previously impenetrable waters to energy drilling, commercial fishing, and shipping. We do not yet fully understand the impact that rising temperatures and increased industrialization will have on the fish, polar bears, whales, seabirds, and other animals that inhabit the Arctic, nor on the indigenous communities that have thrived for thousands of years with a traditional way of life dependent on the region's natural bounty. Therefore, before permitting new development in Arctic waters, researchers should have the chance to study this relatively untouched area, so that science can form the basis for a comprehensive plan to preserve this special place for future generations. The Pew Environment Group is working with Arctic countries, local peoples, scientists, and conservationists to do just that.

As it will take a concerted international effort to protect the Arctic environment, the same can be said for an issue closer to most of our homes: safeguarding the pharmaceuticals we rely on every day. Historically, America has been the world's leader in developing and producing the drugs that have played a crucial role in extending, improving, and protecting our lives. Today, however, drug manufacturing is a global enterprise: Up to 40 percent of drugs sold in the United States and 80 percent of the raw ingredients come from overseas, increasingly from developing nations where there is less oversight. According

to a white paper published by the Pew Health Group, there is growing potential for counterfeit or substandard drugs reaching patients because of the outsourcing of manufacturing, the distribution system's complexity, and the unfortunate reality of those who would take advantage of these conditions through fraud. In addition to documenting the problems in the drug-supply chain, the Pew Health Group has brought together federal regulators, manufacturers, pharmacists, and other stakeholders to discuss solutions, including strengthening the U.S. Food and Drug Administration's authority, improving manufacturing standards, and creating a better system for tracking drugs as they travel the world before arriving in our medicine cabinets.

While we can all relate to concerns over the public's physical health, perhaps no less important is concern for one another's spiritual health. For over a decade, the Pew Research Center's Forum on Religion & Public Life has conducted surveys, demographic analyses, and other social science research to promote a deeper understanding of issues at the intersection of religion and public affairs. Last summer, the Pew Forum produced its second report analyzing the extent to which governments and societies encroach on their citizens' religious beliefs and practices. In its first report, in December 2009, the Pew Forum found that 70 percent of the world's population was living in countries where governments imposed significant restrictions on religion or where there were high levels of religious hostilities in society. Using that original study as a baseline for comparison, the Pew Forum's latest report found that, sadly, more than 2.2 billion people live in countries where government restrictions or social hostilities involving religion have risen.

Pew's founders—the two sons and two daughters of Sun Oil Company founder Joseph N. Pew and his wife, Mary Anderson Pew—would have been deeply disturbed by this news. Not only was their religious faith a cornerstone of their personal lives, but they also strongly believed in the religious freedom of others. This value formed the basis for their giving to religious organizations, missionary colleges, and refugee groups, and it remains integral to this institution as we honor their charitable traditions. Although Pew's founders never could have foreseen some of the challenges our increasingly global society is facing today, they would have recognized the enduring responsibility we each have to serve our fellow man—all 7 billion of them. Our growing interconnectedness makes the words of Henry Ford, a fellow entrepreneur and contemporary of Joseph N. Pew, ring ever truer:

“Coming together is a beginning. Keeping together is progress. Working together is success.”

REBECCA W. RIMEL
President and CEO

The Pew Charitable Trusts

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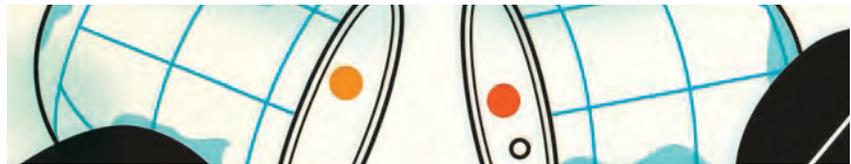
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WHO WE ARE: The Pew Charitable Trusts is a public charity driven by the power of knowledge to solve today's most challenging problems. Working with partners and donors, Pew conducts fact-based research and rigorous analysis to improve policy, inform the public and stimulate civic life.

Pew is the sole beneficiary of seven individual charitable funds established between 1948 and 1979 by two sons and two daughters of Sun Oil Company founder Joseph N. Pew and his wife, Mary Anderson Pew.

Veterans and the Public Weigh Wars And Sacrifices

The year 2011 marked the 10th anniversary of the longest period of sustained warfare in United States history, and never before has the nation waged war with so small a percentage of the population carrying the fight.

The Pew Research Center explored some questions arising from these historic milestones, summed up in the resulting report's title, *The Military-Civilian Gap: War and Sacrifice in the Post-9/11 Era*. With data from a survey of both groups, the report paints a portrait of the rewards and burdens of serving in an all-volunteer military in recent years, and how well the general public understands the military experience.

Both 84 percent of the veterans who served after Sept. 11, 2001, and 71 percent of the general public said civilians do not understand the problems faced by members of the military and their families, the survey found. While recognizing the sacrifices by men and women in uniform and their families, 70 percent of the public consider them “just part of being in the military.”

This gap in understanding has



Families greet soldiers returning from Iraq in September 2010 at Fort Benning, Ga.

concerned the nation's military leaders for some time. “I fear they do not know us,” Adm. Mike Mullen, then chairman of the Joint Chiefs of Staff, said of civilians during a speech at West Point's 2011 graduation ceremony. “I fear they do not comprehend the full weight of the burden we carry or the price we pay when we return from battle.”

The wars in Afghanistan and Iraq have been fought by an all-volunteer military that at any given time has represented about one-half of 1 percent of the U.S. population. At the height of World War II, the comparable number was nearly 9 percent, and that difference goes a long way in explaining the gap in attitudes

between the military and civilians, said Pulitzer Prize-winning historian Rick Atkinson, who led a panel discussion on the survey's findings when they were released.

During World War II, “almost everyone had someone they love in harm's way,” Atkinson said. Today, “relatively few have skin in the game.”

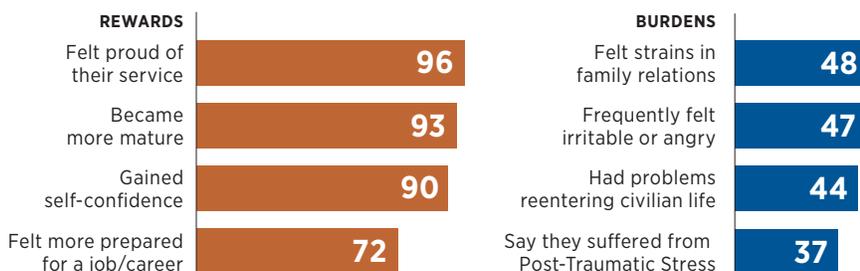
The Pew analysis found that the public deeply appreciates the military: More than 9 in 10 people expressed pride in America's fighting men and women, and confidence in the military is at its highest point in decades. Yet 45 percent said neither war has been worth the cost, and only a quarter said they follow news of the conflicts closely.

Despite their sacrifices, 96 percent of veterans who served in the past decade are proud of their service, and 74 percent said their military experience has helped them get along in life, the survey said. But veterans also report having difficulty readjusting to civilian life at far higher rates than those serving in previous conflicts.

The Military-Civilian Gap also com-

THE REWARDS AND BURDENS OF MILITARY SERVICE

Percent of post-9/11 veterans saying that as a result of their military service they...



compares the views of civilians and veterans on several other issues, including the best way to fight terrorism, the desirability of a military draft and the nature of America's place in the world. The full report can be read at www.pewresearch.org, the Pew Research Center's Web site. The center conducts authoritative analysis of the issues, trends and attitudes shaping the world but does not advocate policy positions.

The report's authors quoted Mullen's remarks at West Point about the differences in views between service members and the public and wrote, "We hope this report will help to bridge some of these gaps in understanding."
—Daniel LeDuc

Local News Obtained From Many Sources

Americans still count on local television to get news about their area. But now they use several platforms for that information, and which one they choose depends on the subject matter and their age, according to a survey by the Pew Research Center's Project for Excellence in Journalism and the Internet & American Life Project.

The survey, produced in association with the John S. and James L. Knight Foundation, found that most Americans, including more tech-savvy adults under age 40, also use a mixture of new and traditional sources to get their information. It indicated as well a more nuanced attitude toward community news and information than researchers previously identified.

The data showed that 64 percent of American adults use at least three types of media every week to get

news and information about their local communities, and that 15 percent rely on at least six kinds of media weekly.

The survey echoed long-standing research findings that more Americans report watching local television news than any other source, but it found that Americans tend to rely on it for only a few topics: mainly weather and breaking news, and, to a lesser degree, traffic. Younger adults rely on local television less, suggesting more vulnerability for the medium in the future.

In another finding, 69 percent of Americans said if their local newspaper no longer existed, it would not significantly affect their ability to keep up with information and news about their communities. At the same time, the report said "newspapers play a much bigger role in people's lives than many may realize. Newspapers (both the print and online versions, though primarily print) rank first or tie for first as the source people rely on most for 11 of the 16 different kinds of local information asked about—more topics than any other media source."

For adults generally, the Internet is a main source for information about restaurants and other local businesses, and it was tied with newspapers as a top source for material about housing, jobs and schools—all areas that place a special value on consumer input. For the 79 percent of Americans who are online, the Internet is the first or second most-relied-upon

WHICH SOURCES TOP THE LIST FOR 16 DIFFERENT LOCAL TOPICS?

NEWSPAPERS 	<ul style="list-style-type: none"> ■ Top source for news on community events, crime, taxes, local government, arts and culture, social services, zoning and development ■ Ties with Internet as top source for news on housing, schools, and jobs ■ Ties with TV as top source for local political news
TELEVISION 	<ul style="list-style-type: none"> ■ Top source for weather and breaking news ■ Ties with radio as top source of traffic news ■ Ties with newspaper as top source for local political news
INTERNET 	<ul style="list-style-type: none"> ■ Top source for information about restaurants and other local businesses ■ Ties with newspaper as top source for news about housing, schools and jobs
RADIO 	<ul style="list-style-type: none"> ■ Ties with TV as top source of traffic news

source for 15 of the 16 local topics examined. For adults under 40, the Web is first for 11 of the top 16 topics and a close second on four others.

The survey also found both citizen-based information sources and old forms of media remain vital. Print newsletters, online listservs and word of mouth were identified as important means by which people learn in particular about community events and local schools.

For more on the survey, go to www.pewinternet.org.
—Tim Warren

'Big Chicken' Report Cites Pollution Issues

Chicken is now the most popular meat in the United States, with the average American consuming almost 84 pounds annually. But producing such a vast number of birds to feed this appetite has created pollution problems in several states, accord-



ing to the Pew Environment Group's report *Big Chicken: Pollution and Industrial Poultry Production in America*.

The report analyzed 50 years of federal and state government data to describe a business that has been remade by industrialization. It detailed how the industry for broiler chickens (those raised for their meat) now is concentrated in large operations in 15 states. The average facility raises more than 600,000 birds a year.

Big Chicken describes how these concentrated animal feeding operations produce huge amounts of broiler litter—the mix of manure and bedding taken out of the facilities. Growers traditionally have disposed of litter by spreading it on open fields or cropland, but when it is over-applied or poorly managed, rain washes it into streams and rivers, causing significant water-quality problems. This is particularly evident in the Chesapeake Bay, which is infused with nutrients generated by broiler litter from Virginia, Maryland and Delaware.

Karen Steuer, director of Pew's Reform Industrial Animal Agriculture campaign, said the report highlighted the effects of the waste on the Chesapeake "because it's a national test case. The Environmental Protection Agency and six states are working on

a large plan to clean up the bay. It's a huge body of water surrounded by millions of people. And many of those millions are dependent on it for their jobs and their recreation."

Among the report's recommendations are monitoring and regulating waste transported from the sites, and limits on the density of animal production based on the ability of crops to absorb nutrients in a given area. Steuer noted that in the spring of 2012, the Environmental Protection Agency is expected to issue recommendations on the role of feeding operations in the Chesapeake's clean-up. "We are working with the agency to get our own recommendations into consideration," she said.

For more on the report, go to www.pewenvironment.org.

—Tim Warren

Artists Draw Attention to Region's Preservation

They were nine of the South Pacific's leading contemporary artists, known to derive inspiration from nature. They were ideal candidates to participate in an unusual voyage to the Kermadec Islands.

In May 2011, Pew's Global Ocean Legacy campaign organized a trip to promote the designation of a large highly protected marine reserve in the Kermadecs region, one of the greatest yet least-known natural wilderness areas in the world. For nearly a week, the artists followed in the path of explorers before them, from the earliest Polynesian voyagers to modern-day conservationists. The artists traveled on a Royal New Zealand Navy vessel, *HMNZS Otago*, to the Kermadecs, located between New Zealand's North Island and the nation of Tonga.

Straddling both tropical and temperate climates, the region has some of the most geologically active and biologically unusual features on the planet. It is home to whales and dolphins, seabirds, fish and deep-sea marine life, as well as underwater volcanoes and a deep-sea trench.

"The prospect of traveling along the surface of one of the ocean's deepest fissures was an exhilarating one—that was matched, conversely, by the sobering fact of the planet's threatened ecosystems, and by the depth of the challenge we face to preserve them," said Fiona Hall, an internationally acclaimed Australian artist.

The voyage resulted in the creation of some striking pieces of art. The artists shared stories of their Kermadec encounters at gallery and university events, and an exhibition of the artworks is to run until June 2012 at the Voyager Maritime Museum in Auckland, New Zealand.

"We took artists to the Kermadecs so they could experience its scale, see its surface, and imagine the diversity of its depths," said Bronwen Golder, director of Pew's Kermadecs Initiative. "I watched them gather impressions

and emotions from the Kermadec Ocean and its islands, and with them, begin to conjure words and images.”

With so many environmental riches, the region has become not only a place for exploration and discovery but also an area to be safeguarded. Although more than 10 percent of the Earth’s terrestrial landscape has been set aside and safeguarded in parks, refuges and sanctuaries, less than half of 1 percent of the world’s oceans is highly protected.

But momentum has gained for creating ocean-scale marine reserves around the world. The Global Ocean Legacy, a project of the Pew Environment Group, was established in 2006 to focus on creating great parks in the seas to help safeguard the Earth’s marine environment. Its efforts have helped double the amount

of ocean habitat that is protected comprehensively.

If designated, a Kermadec ocean sanctuary would become the newest, largest and most spectacular of a new generation of global marine parks.

—Shannon Ternes

Impact of School Closings on Cities Is Examined

Over the past decade, cities around the country have faced the challenge of closing down public schools. It’s a difficult process that affects students, parents and neighborhoods.

Dwindling enrollment, mounting budget pressures, deteriorating or outdated facilities and poor academic performance have prompted the decisions. The Chicago school district closed 44 schools between 2001 and 2009. Detroit closed 59 schools and Kansas City, Mo., shut down 29 in 2009 and 2010.

Now the School District of Philadelphia is preparing for the painful process. It has recommended the closing of nine schools; a decision on the proposed shutterings will be made early in 2012.

Pew’s Philadelphia Research Initiative set out to better understand what is in store for the district by studying the experiences of six other cities, including Chicago, Detroit and Kansas City, in addition to Milwaukee, Pittsburgh and Wash-

ington, DC. Each of these districts has shuttered more than 20 buildings in the past several years—a total of 197 schools.

The study, *Closing Public Schools in Philadelphia: Lessons from Six Urban Districts*, found that the money saved by closing schools, at least in the short run, has been relatively small in the context of big-city school-district budgets: well under \$1 million per school.

The report also found that selling or leasing surplus school buildings tends to be difficult. At least 200 such properties stand vacant in the six cities, including 92 in Detroit.

Although there is limited research on the effects of large-school closings on students, academic studies show that achievement often falls during the final months of a closing school’s existence but recovers within a year.

No matter how well closings are executed, many parents and community leaders are likely to be upset over the shutting down of a school or the options offered for the displaced students. The report analyzed the approaches to closings taken in the six cities and found that the likelihood of public acceptance, though not necessarily enthusiasm, went up when school officials presented the case for downsizing as early as possible; hired outside experts to help guide the process; established clear, quantifiable criteria for deciding which schools to close; showed a willingness to adjust the announced list of targeted schools when faced with compelling arguments; and decided on the plan with a single vote rather than votes on each school.

The full study can be found at www.pewtrusts.org/philaresearch.

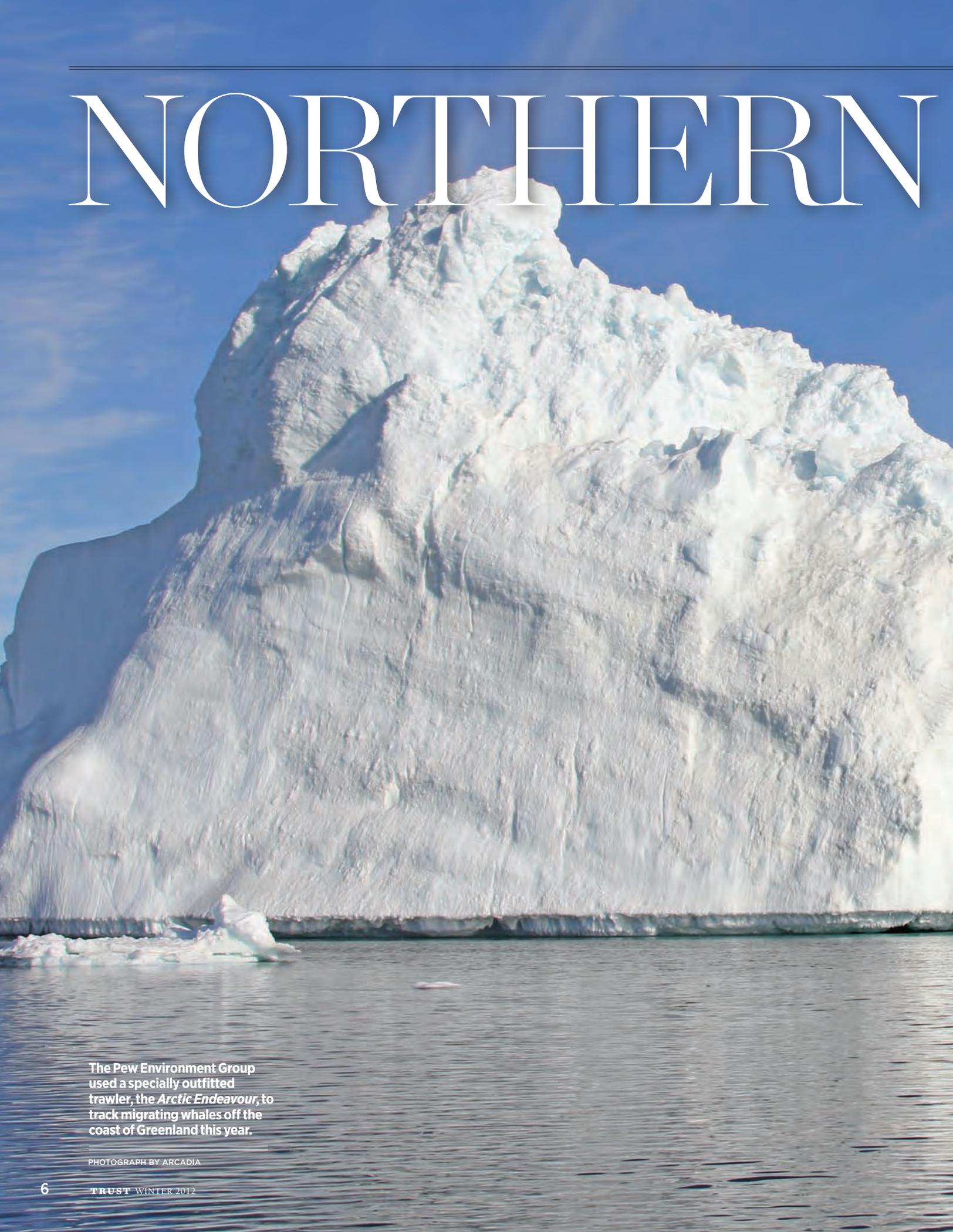
—Cindy Jobbins

COURTESY OF FIONA HALL



“Shooting the Breeze,” by Fiona Hall. She called the trip “exhilarating.”

NORTHERN

A large, jagged iceberg floats in the ocean under a clear blue sky. The iceberg is the central focus, with a rough, textured surface and a peak that resembles a mountain. The water is dark and calm, with a few smaller ice floes visible in the foreground. The sky is a deep, clear blue.

The Pew Environment Group used a specially outfitted trawler, the *Arctic Endeavour*, to track migrating whales off the coast of Greenland this year.

PHOTOGRAPH BY ARCADIA

EXPOSURE

As melting ice opens up the once-impenetrable Arctic, Pew wants science to guide the size of man's expanding footprint in the remote region. **BY DOUG STRUCK**





O uti Tervo was on the bow, crouching from the knifing wind, with another scientist, Kristin Westdal. A hydrophone 30 feet under water connected to headphones beneath Tervo's fur-trimmed parka. The motors were still, the frigid water quiet but for the snaps and whistles of the drifting sea ice and the eerie chatter of bearded seals. For six days they had heard nothing else but silence.

Then . . . a low moan.

Tervo was not sure. "I didn't know if I was just wishing I heard it. Kristin was staring into my eyes. She could see I was excited. I gave her the headphones, and I could see her eyes light up."

A bowhead whale, the subject of biologist Tervo's long fascination, had quietly left Greenland's Disko Bay, headed for the entrance to the famed Northwest Passage, a stop on its grand, looping migration. Somewhere beneath the *Arctic Endeavour*, the whale broke its mute sojourn, perhaps calling to the herd slipping toward the polar ice pack, or perhaps gauging the ice from the echoes.

"The whales sing all the time when they arrive in Disko Bay in early January, and then by late May it's complete silence until they leave. Nobody has had the chance to follow them to see if they say anything on their migration," said Tervo, a

Finnish scientist aboard the Pew research vessel.

The 45-foot *Arctic Endeavour* prowled Greenland's western coast for four weeks last June to expand scientific knowledge of migrating whales and the legendary narwhal, and to make a point about how much is not yet known.

"There's an incredible marine migration that goes through that area," said Christopher Debicki, who headed the expedition for the Pew Environment Group. "We have been talking about it for years, but we wanted to study it. There are a lot of mysteries about that migration."

Pew's interest in the Arctic North is prompted by what it sees as a fleeting opportunity—and a growing threat. The opportunity is to put science-based rules in place before man's footprint on the remote region grows greater.

"Pew's Oceans North campaign is about trying to get out ahead of the curve for a new frontier," said Steve Ganey, a senior officer in the environment group. "We want to make sure that before we do anything, we look at it and make sure we do it right."

The threat comes from a meltdown induced by climate change, and from the fishermen, vessel captains and oil drillers who are watching the growing open Arctic sea, preparing to move in.

The Arctic is feeling the effects of climate change twice as quickly as more temperate zones. Already, average temperatures have risen 2 to 4 degrees Fahrenheit in the Arctic



LEFT: The tiny fishing village of Tasiusaq in Greenland welcomed crew members aboard the *Arctic Endeavour* when they had to change plans after encountering a wall of offshore ice. **ABOVE:** Juvenile walrus must compete for space on an ice floe in Canada's Arctic Ocean.

over the past decade, with upper predictions of a 13-degree rise this century. The polar ice cap, once a massive and indomitable helmet atop the earth, is becoming the planet's beanie, skirted by ships in open water. The average ice cap shrank by one-third in the past decade compared with the previous two; last summer, it was the second-smallest on record, only slightly larger than in 2007.

Polar bears and seals, which thrive on the confluence of ocean and ice, are seeing their hunting and birthing areas melt away. Inuit and other northern indigenous peoples can no longer trust the frozen paths they have used for thousands of years. The underpinnings of the marine ecosystem—from plankton to forage fish to predators—are shifting along with the melting of the ice into new relationships and patterns that both Arctic residents and scientists are struggling to understand.

"There's no question that my grandkids and my son and daughter will be in a very different world," said Edward Saggan Itta, 66, a hunter and former mayor of Alaska's North Slope Borough, a community that includes 2,600 Inupiat Eskimos. Last spring, Itta and his son crossed miles of rough ice to a narrow open channel created by the thaw. They harpooned a huge bowhead whale slipping through the channel on its migratory trek, one of four whales taken that season by the

community for subsistence.

Because of the changing climate, the whales now come two or three weeks earlier than in years past, making the spring hunt difficult and dangerous, Itta said.

"We're reluctant to go out so early in the year. It's still dark, and the temperatures are below freezing," he explained. "The ice is very rough, and very thin, and it's harder to keep the whaling crews safe."

The frozen mysteries of the polar region captivated—and often captured—explorers just a century ago. Men like Amundsen, Henson, Byrd and Franklin sought fame by daring the ice pack. Many perished, their vessels caught and crushed in the Arctic's grip.

Now, holiday cruise ships bearing tourists nose tentatively through Canada's Northwest Passage. On the other side of the North Pole, tankers plow through 2,000 miles of open water past the northernmost tip of Russia. Drillers prepare to plunge through the cold waters to tap oil and gas. And scientists keep advancing their estimates of when summers will find the Arctic Ocean ice-free: perhaps in 90 years, they used to say, then 40; now it seems likely within one or two decades.

"When I was working out of Barrow, the whole thing was totally ice-covered," Vera Alexander, who spent 50 years studying

Arctic oceanography at the University of Alaska at Fairbanks, recalled of her work on the northernmost U.S. settlement. “Now, in the summer, there’s not an ounce of ice to be seen.”

“The ice is melting. We are going to have a new ocean,” Ganey said. “And there’s going to be tremendous interest in oil and gas, in new shipping routes, in industrial fishing.”

A range of Arctic countries, international organizations, local communities and environmental groups fret about how to avoid a free-for-all in the coming rush for resources.

“We identified a bottom-up approach,” said Ganey, “one that has pragmatic policies, one that people can agree to in the areas that are going to be affected first.”

As part of that strategy, Pew tapped Scott Highleyman, a lawyer who had worked on conservation throughout Alaska for 13 years. Starting in 2008, Highleyman spent nine months traveling around the northern Inuit communities of Canada, talking to the people who stood most to lose—or gain—from changes in the Arctic.

“The number one rule is that you don’t come up North with preconceived ideas. You are looking for northern conservation solutions to northern problems,” Highleyman said. “There are lots of north-south tensions around these issues,” he noted. “But you start talking about habitat for the marine life that communities still rely upon, and you find very quickly you have common ground.”

Shrinking Ice

For at least 800,000 years, the central Arctic Ocean has been frozen with year-round ice (map 1). By mapping existing scientific data about the extent of Arctic ice, Pew’s Oceans North campaign found that from 14% to 40% of the international waters of the central Arctic Ocean were open water in recent summers.

As ice floes that block fishermen disappear, commercial fishing is likely to follow. But incomplete scientific information about the marine ecosystem could mean problems in ensuring new fisheries are sustainable. Inuit communities want to safeguard important fish stocks like Arctic cod that are key in the region’s food chain.

“A fleet of 30 factory trawlers is not going to show up in the Beaufort Sea tomorrow,” Highleyman said. “But five boats could show up in the hotspots and wipe out the fish that sustain beluga whales. Those hotspots are incredibly important. And we don’t really understand how they work. There is a huge population of Arctic cod, for example, and we don’t really know where they go in winter.”

Pew started work in December 2008 under the direction of Marilyn Heiman, who oversees the institution’s U.S. Arctic program. By November 2009, with the support of conservationists, Alaska’s commercial fishing industry and Arctic communities, the United States adopted a fisheries management plan to prevent the start of commercial fisheries in the 212,000 square miles of U.S. Arctic waters until scientific data could ensure the ecosystem could sustain them.

Similar steps are being considered in neighboring Canadian waters, where the government has agreed to start working with Inuvialuit organizations on when and how commercial fishing in the Canadian portion of the Beaufort Sea should be considered. Pew’s Oceans North Canada campaign has supported background science and technical papers to aid in the discussion.

To the east across the top of North America, Pew is helping to support creation of a large marine protected area in Lancaster Sound. Portal to Canada’s Northwest Passage, Lancaster Sound is a major migratory pathway for 85 percent of the world’s narwhal, whose spear-like tooth made them the unicorns of the sea, as

1979–2000



2007





ABOVE, LEFT: Melting ice due to climate change has meant commercial fishing fleets have greater access to once-inaccessible species, raising concerns about their preservation. RIGHT: The hunting and birthing areas of Arctic polar bears and of sea lions have also shrunk.

well as bowhead whales. In addition to conducting scientific research, Pew is working with native Inuit to chronicle their time-tested knowledge of the region. Recently, the Canadian government renewed its pledge to create a national marine conservation area in Lancaster Sound that would bar offshore oil and gas development. In the meantime, the government promised not to allow offshore oil and gas leasing or seismic testing.

“Industry says it can be done safely. All we are asking is that they show us before they drill,” said Trevor Taylor, Oceans North Canada’s policy director in Ottawa, and a shrimp- and crab-boat captain before he served in Newfoundland’s provincial legislature.

Canada’s National Energy Board is reviewing drilling in its Arctic waters. Pew’s Oceans North Canada campaign released a report in September calling for stronger environmental regulations on drilling and greater planning for spill clean-up, and urging that the communities of the North get a proportional share of the royalties.

“We know inevitably you will have some problem. You will have a spill,” Taylor said. “The people who bear the brunt of any disaster—the marine mammal loss, the fisheries

loss—would be the people of the Arctic.”

Even before the Deepwater Horizon drilling rig exploded in the Gulf of Mexico in April 2010, Pew had urged a time-out on oil and gas activity in the U.S. Beaufort and Chukchi seas until there was adequate spill response in place and a science-based

plan that protected wildlife and indigenous communities. In March 2010, the Obama administration canceled four new drilling-lease sales in the Arctic and withdrew 33 million acres off southwest Alaska, which includes Bristol Bay, from oil and gas leasing until 2017.

This culturally and ecologically rich region, known as America’s fish basket, provides more than 40 percent of the U.S. seafood catch and is home to the largest wild sockeye run in the world. Pew is working with communities and fishermen in the region for a permanent ban on drilling in Bristol Bay.

Despite these time-outs, the push for drilling in the U.S. Arctic continues. Oil drilling off Alaska’s North Slope already is an incendiary political issue.

“It is likely there will be drilling,” said Heiman, a veteran of conservation efforts in and out of government who helped shape legislation in Alaska after the 1989 *Exxon Valdez* oil spill.

“The question is when and where and how fast the ad-



ABOVE: *Arctic Endeavour* crew members camped on an ice floe off the coast of Greenland for two days to track migrating bowhead whales and record the exhalations from their blowholes, which can be a form of communication with other whales. **RIGHT:** A spectacular Arctic sunset.

ministration will let the drilling happen. With high seas, ice, darkness that lasts for two months and sub-zero temperatures, this is probably the most challenging place on the planet to drill for oil, and the most dangerous.” To help answer some of these questions, Oceans North U.S. commissioned the most comprehensive analysis to date on oil-spill prevention and response in the U.S. Arctic.

The findings of the report made a case for a more cautious approach to oil and gas development. Equipment for oil-spill cleanup is not close by in the Arctic. There are airstrips or boat ramps instead of harbors and airports, and flights are often grounded by bad weather. Booms and skimmers do not work in ice, and chemical dispersants are ineffective in cold water.

“We are not opposed to all drilling in the Arctic Ocean,” Heiman said. “But we really need to ensure that spill response and containment equipment have been tested in Arctic conditions, and that Arctic-grade prevention and response standards are in place before industry moves forward.”

Drilling in the Arctic should not be an all-or-nothing decision, said Henry Huntington, Pew’s Arctic science director in Eagle River, Alaska.

“Biology is not uniform. Some places are more important than others, just like on land: You wouldn’t want to drill in Yellowstone Park,”

 To learn more about the Arctic go to www.pewenvironment.org/arctic

he said. “There are shallows and depths and upwellings. So it matters where you drill. You decide on the areas where biology is so important that you just ought to stay out of them.”

In the pristine Arctic waters, oil-well blowouts are not the only nightmare. A passing cargo ship or tanker punctured by ice could cause a disaster in this fragile environment, Heiman said.

“As the ice melts, the Northwest Passage is going to become a major shipping route,” she said. “Responding to an oil spill from a tanker would be virtually impossible there.”

But the U.S. and Canadian policies sought by Pew are limited, as countries control areas up to 200 miles from their coasts. Drawing a line at those limits from the United States, Russia, Norway, Canada and Greenland leaves an area of international jurisdiction in the central Arctic Ocean about the size of the Mediterranean Sea. No international agreement is in place to regulate commercial fishing in this area. But it has never mattered: The area has been covered in year-round ice for at least 800,000 years. Until now.

“Using government data, we mapped the extent of summer sea ice in relation to the international waters of the central Arctic Ocean for the first time,” Highleyman said. Pew’s analysis found that in recent summers, from 14 percent to 40 percent of this area was already open water. “It’s now feasible for commercial fishing to move into the central Arctic Ocean. And without a new international agreement, it is perfectly legal for fishing vessels from any country to do so without any rules or information about the ecosystem.”

Based on the analysis, in 2010 Pew began encouraging Arctic countries to meet and negotiate a simple international agreement to prevent the start of commercial fishing in the international waters of the central Arctic Ocean until the science and management are in place to ensure sustainability. Highleyman is encouraged by the progress: “The United States and Greenland have stated an agreement is needed. We’re hopeful that leadership from Russia, Canada and Norway can make the agreement a reality.”

Although an international agreement is needed to regulate commercial fishing, the fate of much of the continental shelf in the area will be decided under the 1982 Law of the Sea Treaty, signed by 162 countries. Coastal nations such as Russia, Denmark and Canada are hoping to show a tribunal governed by the treaty that their national jurisdiction of continental shelf—including any underlying oil and gas—should be as much as 100 miles beyond each nation’s current 200-mile limit.



The United States would like to make the same claim but can't because the U.S. Senate has never ratified the treaty. Pew is urging ratification of the agreement to give the United States full membership in the international community deciding the fate of the Arctic.

In both the Arctic's national and international waters, Pew advocates science- and community-based solutions to the region's challenges. As Highleyman noted, "We're not trying to stop all development in the North. The North needs an economy. The young people in the North all need jobs."

The campaigners worry that attempts to put a process in place may be overwhelmed by the fast pace of climate change.

Heiman believes it's an effort worth making.

"It's about trying to have a bigger vision, and look at a place that has not been destroyed yet, hasn't been lost yet," Heiman said. "We can play a role in trying to maintain some of those incredibly important ecosystems. That is some of the best work we can do."

"It is possible to do it right," Highleyman added. "But you can't do it right without the science. We don't have the answers to a lot of the important questions."

That was the motivation for the voyage of the *Arctic Endeavour*, seeking to track bowhead whales and narwhal in their restless trek as they migrate from Greenland to Lancaster Sound and loop back to Hudson Bay.

Pew wanted to show the usefulness of a small trawler to scientists, cutting the dependence on big, expensive icebreakers typically used for research. In this quest, fickle ice blocked the planned route: The *Arctic Endeavour* hit a wall of ice as it tracked the bowhead migration off northwest Greenland. The whales slipped below the frozen wall, undeterred in their journey, able to break through two feet of ice for an occasional breath.

Guided by Inuit from a village on the nearby shore, the ship's crew camped out on the moving ice floe for two days. Seals came to meet the visitors, perhaps curious about the humans' fluorescent snowsuits. The sun hovered, always above the horizon. Their guides kept watch for polar bears, agile swimmers that can erupt from the water with alarming speed.

"It was an incredibly beautiful floe edge, and the bowheads were bumping into it," said Debicki, the expedition leader. "You could look out and see their plumes, their backs, their tails. It was a very, very still day, and the nights were still. The air was full of bowhead exhalations—steam shooting out of their blowholes.

"It was an absolutely serene place," he added. "There was such calmness. It was the kind of moment that reminds me why I'm doing this work." ■

DOUG STRUCK, a former foreign correspondent for the *Washington Post*, is a Boston-based science and environmental writer who teaches at Emerson College. He last wrote for *Trust* about Pew's shark conservation efforts.





Seeking a Better Prescription for Drug Safety

With more medicines produced in a global marketplace than ever before, the Pew Health Group is partnering with industry and advocates to make the drug supply safer.

BY JODI ENDA *Illustration by Harry Campbell*

They assumed the medicine would make them better.

Instead, at least 105 Americans died after taking a new sulfa drug that had been tainted with an industrial solvent. There was public outrage, and Congress responded swiftly, passing a law to protect people from dangerous, contaminated or counterfeit products.

That episode was nearly three-quarters of a century ago, and ever since Americans have trusted that the medicine they buy at the local pharmacy is safe. For the most part, it has been.

But the world has changed considerably since President Franklin D. Roosevelt signed the Food, Drug, and Cosmetic Act in 1938, the year after that deadly sulfa scare. In those days, almost all the medications Americans relied on, as well as the ingredients that went into them, were produced in the United States. Today, 80 percent of the ingredients used in medications sold in this country and 40 percent of finished drugs are manufactured overseas, with little U.S. government oversight.

Time and again in recent years, common medications, altered by accident or design, have killed or harmed people in this country and elsewhere. In late 2007 and early 2008, dozens

of people in the United States suffered adverse reactions, including several who died, after taking adulterated heparin, a common blood thinner. In 2006, at least 78 patients died in Panama when the government unwittingly distributed cough syrup that contained diethylene glycol, the same solvent that killed so many Americans 69 years earlier and that has killed children in Haiti and Nigeria in recent decades.

There are too many unscrupulous actors eager to make a buck—or, more likely, millions of them—from counterfeit or adulterated drugs, too many middlemen with the wherewithal to tamper with medications, too many opportunities for the drugs to be stolen or diverted, too few safeguards to protect them from criminal acts or negligence and too little money to get the job done, said U.S. officials charged with protecting the public from unsafe drugs.

“I think it’s important to recognize that while drug crises aren’t documented that frequently, there are real threats in the supply chain,” said Deborah Autor, the U.S. Food and Drug Administration (FDA) official who oversees global drug production. “With respect to another crisis like heparin, it’s really not a question of if it will happen. It’s a question of when it will happen.”

The FDA has outlined proposals that would give the agency increased authority and more money, especially for overseas inspections, to better protect the public.

“It really would be much better for the American public if we have in place a sufficient statutory scheme and safety net to prevent drug-contamination-quality problems and counterfeiting to the fullest extent possible,” Autor said.

LEFT: At a small factory in Shandong, China, a bare-handed worker wrings the pulp from pig intestines. **RIGHT:** In a modern heparin factory in Anhui, workers wear thick gloves and sanitary conditions are emphasized.



“That new legislation is essential to equip the FDA to move from being a regulator of domestic products to being one overseeing a worldwide enterprise.”

The Pew Health Group has been working toward that goal since the heparin deaths.

“Heparin was a wake-up call for a lot of parties, including the pharmaceutical industry and the FDA itself . . . and for us,” said Allan Coukell, the health group’s director of medical programs.

In late 2007, the FDA and the U.S. Centers for Disease Control and Prevention began fielding complaints that patients undergoing dialysis were suffering from allergic-type reactions and hypotension. The culprit turned out to be heparin, and investigators determined that the drug’s active ingredient, which is derived from pig tissue, had been contaminated with a cheaper, synthetic material during the manufacturing process in China.

Gordon Johnston, senior adviser for regulatory sciences for the Generic Pharmaceutical Association, called the heparin deaths the turning point for drug companies and others up and down the supply chain. The event forced the industry “to understand that there are those out there who have economic motivations to adulterate materials used in drugs.”

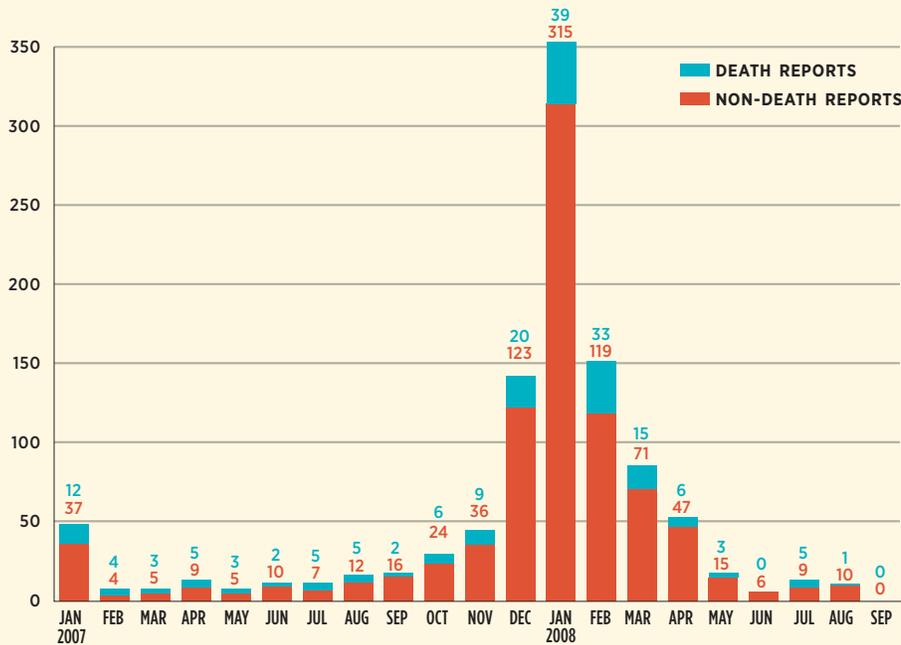
The heparin episode made clear that the system designed to safeguard drug production in the United States did not work on a global scale, Coukell said.

The 1938 law spurred by those earlier deaths enumerated a host of requirements for companies that produced drugs and their ingredients in the United States. But it could not foresee that one day much of that production would occur overseas. Currently, Americans consume medications manufactured in about 150 countries, led by China and India, according to the FDA.



PHOTOGRAPHS BY GORDON FAIRCLOUGH/WALL STREET JOURNAL

Adverse Event Reports in Patients Receiving Heparin and Exhibiting Allergic-Type Symptoms January 2007–September 2008



and some don't have good insight as to who their suppliers are or the conditions under which drugs are being manufactured," Coukell said.

Further, he said, suppliers can outsource production without the knowledge of the pharmaceutical companies that affix their names to the medications. In some cases, the FDA has documented the existence of "show-shadow factories," in which the makers of potentially unsafe drugs or ingredients set up two factories—a fake, clean one to show inspectors and one where the work actually takes place, Coukell said.

"We need the manufacturers themselves to be held accountable for overseeing their own supply chain," he said. "Many companies already do that. But we have to

The difference in oversight is stark: If you operate a plant that manufactures drugs or their ingredients in the United States, you can expect an FDA inspector to visit every two or three years. If you run a similar plant overseas, you can expect an FDA inspector to visit maybe every nine years, the stated average. Some plants might never be inspected, Coukell said.

"In reality, what you get is pre-approval inspections"—the FDA gives the nod to a plant to begin production—"then they don't get back there," he said. "They're done before the company's actually making drugs."

Once they receive pre-approval to manufacture a drug overseas, it is up to pharmaceutical companies to ensure the medications they sell are safe. But, again, the global marketplace makes that difficult, according to Coukell and industry representatives. From production to transportation to distribution, there are numerous points during which a drug might become jeopardized. In some countries, estimates of counterfeit drugs infiltrating the supply chain are as high as 30 percent, according to the World Health Organization's International Medical Products Anti-Counterfeiting Taskforce. Although there are no precise estimates for counterfeit or adulterated drugs in the United States—and the figure certainly is nowhere near 30 percent—vulnerabilities exist.

"A lot of companies are outsourcing their manufacturing,

make sure the weakest actors and those who want to cut corners meet standards."

Fresh from a victory on food safety in which Pew helped bring together industry representatives and food safety advocates, the Pew Health Group has conducted extensive research, produced a 2011 report titled *After Heparin: Protecting Consumers from the Risks of Substandard and Counterfeit Drugs*, convened a roundtable and, again, served as an "honest broker" among stakeholders as it works toward the goal of better protecting the American public's drug supply. In January 2011, President Barack Obama signed the FDA Food Safety Modernization Act, which represents the first significant change to food-safety provisions of the Food, Drug and Cosmetic Act since Roosevelt's day. Pew, the FDA and a number of pharmaceutical companies and trade associations are pushing for a similar update to laws regulating medications.

"There are dangerous, hidden, unnecessary risks in the products we rely on every day," said Shelley A. Hearne, managing director of the Pew Health Group. "We look for those smart, commonsense improvements that make for a better, more efficient, safer marketplace."

The new food safety law "gave some basic, long-overdue fixes to an antiquated food safety system overseen by the FDA,"

Hearne noted. It gave the FDA the authority to recall contaminated products and to increase inspection. It put into place risk-based standards for inspecting fruits and vegetables. It took into consideration that food is not produced in the same way or in the same places as it was seven decades ago.

Similarly, Hearne said, Congress should update the law on pharmaceuticals. “We do not have the same type of tools and sophistication within the FDA to ensure the safety and efficacy of our drugs,” she said. “It’s shockingly similar to those commonsense fixes we just got in place for fruits and vegetables.

“Most Americans sleep better assuming that their government is keeping an eye out to ensure that contaminated, counterfeit, adulterated products aren’t coming into the marketplace. We fixed it on foods; now we need to fix it on pharmaceuticals. We count on it to improve and save our lives.”

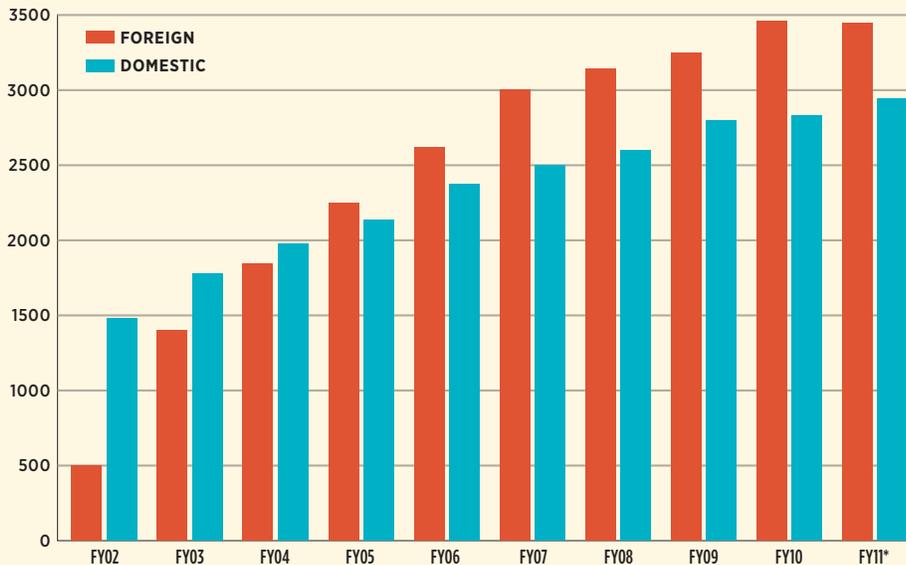
On two days in March 2011, Pew convened a Washington, DC, conference that brought together people involved in the manufacture, distribution, sales, analysis, research and oversight of pharmaceuticals in the United States. Participants included the president of the nation’s largest generic drug company, the director of a China-based pharmaceutical auditing company, representatives of pharmaceutical companies, pharmacists, and chain and independent drugstores. Also participating in the meeting were representatives of physicians and consumers, AARP, the FDA and trade associations representing just about everyone along the supply chain.

“Like most people, I didn’t spend a lot of time worrying about the safety of pharmaceutical products. Tainted pharmaceutical drugs were simply a news story that I read about in the papers. But now we know how globalized the drug supply chain has become,” said Sen. Michael Bennet, a Colorado Democrat and member of the Health, Education, Labor, and Pensions Committee, who delivered the conference’s keynote.

“Making sure pharmaceutical drugs meet the highest standards for safety and quality is important to me, not only as a U.S. senator but as a parent.”

Bennet has introduced legislation that

FDA-Registered Domestic and Foreign Establishments Subject to Good Manufacturing Practices Inspections 2002-2011



would strengthen the FDA’s oversight of pharmaceuticals by giving it the power to recall medications—a practice that currently is voluntary—improve its tracking systems and require drug companies to have quality-management plans.

“We can take key steps, including more accountability of drug company ingredients, requiring the FDA to fix its inadequate monitoring systems, and increasing penalties for those who game the system,” he said.

Advocates for improved oversight hope Congress will act in 2012, when it is expected to reauthorize the Prescription Drug User Fee Act and pass the Generic Drug User Fee Act, which will help finance FDA inspections.

After the conference, Pew’s final report made a number of policy recommendations, including these:

- Significantly increase the FDA’s oversight of foreign drug manufacturing and use comprehensive risk assessment to prioritize inspections.
- Augment the FDA’s oversight through the use of other inspections, including those conducted by trusted foreign regulatory agencies or third-party inspectors.
- Improve baseline requirements for manufacturer-quality systems, including oversight of contractors and suppliers.
- Strengthen border screening and give

 To learn more about drug safety go to www.pewtrusts.org/drugsafety

the FDA the authority to destroy or refuse entry to products at the border.

- Allow the FDA to require drug recalls and provide it with subpoena power.
- Stiffen criminal and civil penalties for violations.
- Create a “track and trace” system, featuring unique serial numbers for every bottle or box of medicine, to allow wholesalers and pharmacies to verify authenticity.

Pew is following through on the report and conference outcomes, educating members of Congress and their staffs about the need to update the law and working to build a bipartisan coalition of support.

“This is not a partisan issue,” Hearne said. Instead, the challenge is bringing about change in an era of austerity. “We’ve got a constricting federal budget, we have a federal agency that is already overburdened and understaffed, we have a wide range of interests and concerns out there,” she said. “While these are commonsense fixes, we’ve got to make sure that they stay in a high-priority queue.”

A number of industry advocates are joining with the FDA and Pew to push for change. That is unusual in Washington, where it is far more commonplace for regulators and the regulated to be on opposite sides of issues related to mandates, compliance and fees. But in this case, with some coordination from Pew, many groups are collaborating to protect the public—and themselves. After all, if the medications that Americans need are unsafe, there will be plenty of blame to go around.

“The pharmaceutical companies are responsible for the safety of their supply chain. We as an industry are stepping up to that challenge in the face of the threats coming at us,” said Martin Van Trieste, founder and board member of Rx-360, a nonprofit consortium of pharmaceutical companies and their suppliers. “However,” he said, “we can use help from policy makers and regulators around the world.”

The 70 companies represented by Rx-360 would be willing to pay higher fees to finance FDA inspections because it would “level the playing field” by penalizing those who today are “profiting from cutting corners,” said Van Trieste,

who also is senior vice president for quality at Amgen. “It will economically help the compliant manufacturers.”

Additionally, he said, tougher regulations, increased transparency along the entire supply line and harsher penalties would make it more difficult for counterfeiters to get their products into pharmacies. Under current law, he said, there is little disincentive—and considerable financial motivation—for those who deal in phony or adulterated medications.

“If you get caught counterfeiting a Gucci purse or a DVD, you will go to jail longer than if you counterfeit a pharmaceutical that kills people,” he said. “If a criminal takes \$1,000 and then turns that into a counterfeit consumer good like a Gucci purse or a Rolex, he can make about \$10,000. If he takes that same \$1,000 and turns it into an illicit drug like crack cocaine or heroin, he can make \$100,000. If he takes \$1,000 and turns it into a pharmaceutical, he can turn it into a million dollars.”

After *Heparin* cited one industry insider who estimated that the makers of the adulterated heparin made \$1 million to \$3 million in profits.

What’s more, counterfeit and adulterated drugs are becoming more sophisticated than in the past, and harder to detect. Standard tests on the tainted heparin did not indicate the presence of oversulfated chondroitin sulfate, a synthetic that is similar to the actual drug but substantially cheaper to

produce. In Panama, it took investigators more than a month to identify that children’s cough syrup contained diethylene glycol, the solvent used in antifreeze, rather than glycerin. And because the material went through brokers in China and Spain—and was relabeled by each one—officials had trouble pinpointing the source.

For most of seven decades, the Food, Drug, and Cosmetic Act permitted Americans to feel secure that the contents of their medicine cabinets were safe. Globalization has removed some of that assurance.

“The assumption is that, of course, the government is doing that,” Hearne said. “There are certain, basic things you just want to trust. So let’s make sure those systems are in place.” ■

More transparency and harsher penalties would make it harder for counterfeiters. There is now little disincentive, and considerable financial motivation, for those who deal in phony or adulterated medications.

JODI ENDA, former White House correspondent for Knight-Ridder Newspapers, is a Washington-based writer. She last wrote for *Trust* about Pew’s Public Safety Performance Project.



RISING RESTRICTIONS ON RELIGION

The Pew Research Center's Forum on Religion & Public Life is documenting trends in restrictions on religious practices around the globe, prompting new conversations on faith, liberty and political power.



ABOVE: In 2009, Egyptian pig farmers demonstrated against the government's decision to slaughter all pigs because of swine-flu fears. Some observers said the move constituted religious discrimination because it harmed only Egypt's Christian minority.

RIGHT: Activists in Rio de Janeiro placed thousands of "hands" in the sand in 2010 to protest Iran's treatment of members of the Baha'i faith. Iran accused some Baha'i leaders of "insulting religious sanctities."

In Iran, seven Baha'i leaders are arrested and accused of "insulting religious sanctities," among other things. In France, a legal ban on students wearing religious symbols, such as headscarves, remains in place. In the Philippines, a Protestant village pastor is kidnapped and killed by guerrillas. And in Russia, attackers break the windows of a synagogue in Nizhny Novgorod.

For years, such moves by governments and social groups to control or stamp out religious activity have been dutifully recorded by the U.S. State Department as well as a growing number of international institutions and human-rights groups. They collect the anecdotes and then render opinions on the state of religious freedom around the world.

The accumulating mass of anecdotes within those reports, it turns out, was also creating an untapped opportunity.

Researchers at the Pew Research Center's Forum on Religion & Public Life have seized that opportunity, unlocking data in unprecedented ways. The Forum is pioneering the measurement of restrictions on religion by governments and from within societies at large. For the first time, the methods used in large-scale, quantitative social science research are being applied to the field of religious freedom,

and that breakthrough is fostering discussion of a topic that can quickly ignite sensitivities over faith, identity and political power.

The release of the Forum's August 2011 report, *Rising Restrictions on Religion*, drew global attention for finding that, in large parts of the world, it is becoming more difficult to practice some religions. More than 2.2 billion people, nearly a third of the global population, live in countries where either government restrictions on religion or social hostilities involving religion rose substantially between mid-2006 and mid-2009. *Rising Restrictions* builds on the findings of a baseline study, *Global Restrictions on Religion*, released in December 2009, which reported that 70 percent of the world's people live under high or very high restrictions on religion. The two reports begin a series of studies examining trends in religious restrictions over time.

Both are part of the Pew-Templeton Global Religious Futures Project, a jointly funded effort of The Pew Charitable Trusts and the John Templeton Foundation that analyzes the impact of religious change on societies around the world. The collaboration has already produced reports projecting the future global population of Muslims, assessing the interaction of Islam and Christianity in Sub-Saharan Africa, and surveying evangelical Protestant leaders around the world.



OTHER FINDINGS FROM THE FORUM ON RELIGION & PUBLIC LIFE

Over the three-year period studied, Christians and Muslims faced either government or social harassment in 66 percent and 59 percent of countries, respectively.

The number of countries that experienced mob violence related to religion rose from 38 (19 percent) as of mid-2008 to 52 (26 percent) as of mid-2009.

Religion-related terrorist groups were active in 74 countries in the period ending in mid-2009, and the groups carried out acts of violence in half of those countries.



For many specialists on religious freedom, the Forum's latest effort provides an independent confirmation of trends they have suspected from watching conditions on the ground. But the Pew work also provides a new focus for dialogue in a field in which rights advocates and government representatives often talk past each other, assuming there is meaningful conversation in the first place. Chris Seiple, president of the Institute for Global Engagement, called the reports "critical to the evolution of our field. It provides an empirical touchstone in which all sides can come together and have a candid and constructive conversation."

The Forum's work is a "historic" addition to the study of religious freedom, said Allen Hertzke, an expert on religion and politics and presidential professor of political science at the University of Oklahoma. "For centuries, scholars, intellectuals and religious leaders have been making arguments about religious freedom—that when government no longer restricts religion or no longer favors one dominant religion, society is more peaceful, vibrant and prosperous," he said. "The Pew reports, for the first time in history, provide us with a global database that enables us to test these assertions."

Rising Restrictions and *Global Restrictions on Religion* constitute the first quantitative social science studies measuring both governmental and social restrictions on religion from numerous sources, as well as the first with a methodology that others can see and replicate, said Brian J. Grim, the principal researcher and director of cross-national data for the Forum. The assessment is global in scope, covering 198 countries and territories, and is designed to measure change over time.

Building on the 2009 baseline study, *Rising Restrictions* shows that of the world's 25 most populous countries, eight had substantial increases in restrictions on religion and none had a substantial decrease. Most countries experiencing substantial increases in government restrictions or social hostilities already scored at high or very high levels in those assessments. Yet nearly half of the countries with substantial decreases in restrictions already scored low. The Forum's researchers believe they could be seeing "a gradual polarization" between high- and low-restriction countries, a trend they will continue to examine as new data emerge in the coming years.

The Middle East-North Africa region had the largest share of countries in which official restrictions on religion rose, and it remains the region with the highest curbs overall. The Americas had the least. But the latest report also found that Europe had the largest proportion of countries in which social hostilities related to religion

increased—countries such as Bulgaria, Denmark, Russia, Sweden and the United Kingdom.

Drawing on earlier work at Pennsylvania State University with fellow sociologist Roger Finke, Grim devised an innovative scoring system. Because the concept of religious freedom is inherently hard to measure, the logical alternative was to identify the presence of various restrictions in each country or territory. Grim divided restrictions into two main categories, official government actions and social acts of hostility. He developed 33 measures phrased as questions, all funneling information into one of two composite scores: a government restrictions index and a social hostilities index. Research assistants known as coders would "ask" those questions of 18 publicly available information sources, including the State Department's annual report and those from the United Nations, European Union and British government, as well as nongovernmental organizations such as Human Rights Watch, Freedom House, the Hudson Institute and Amnesty International. Commentaries and opinions were ignored; only information about concrete government actions or instances of religious violence or harassment by social groups was recorded.

Two groups of coders would separately pore through the reports. Any disagreements were reviewed and resolved by Grim. Anastasia Kolivas, a former coder who was then a Georgetown University student, recalls one: whether the Egyptian government's decision to cull all of the nation's pigs amid a swine-flu scare was motivated in part by religious discrimination. Unlike Christians, Muslims are forbidden to eat pork. Grim studied the record and decided the destruction of the pigs harmed only Egypt's Christian minority and so constituted a form of government harassment, especially because the World Health Organization and Egypt's Food and Agriculture Organization announced that the slaughter of the animals would not affect circulation of the virus. "We had a lot of supervision. It was very carefully structured," recalled Kolivas. Pew's researchers

 To read the full report go to www.pewforum.org

also made a series of decisions on statistical methods that, in effect, set a high bar for declaring when change is taking place. That has helped to armor-plate the results from charges of bias, sloppiness or trafficking in unrepresentative anecdotes.

The caution reflects the culture of the Washington, DC-based Pew Research Center, of which the Forum is part: nonpartisan, non-advocacy, fact-driven. “It’s the niche we occupy in a town full of advocates,” said Luis Lugo, the Forum’s director. “Disciplining ourselves to stay within our game is what makes us so valuable.”

The reports offer plenty of analysis of the statistical findings but none that judges governments and societies. So just how narrow is the path Pew follows on the topic? “We’re not technically for or against religious tolerance,” Lugo said. “There are many different kinds and levels of government restrictions on religion, and we don’t try to decide whether some are justified and some are not. We also don’t say that if a country has a high level of social hostilities involving religion, the country is necessarily at fault. The point is, in this research, as in all of our research, we strive to avoid taking normative positions. That’s because we are devoted to providing facts that everyone, no matter what their position on the issues of the day, can trust.”

Said Seiple, “Both Brian and Pew are radically nonpartisan. It’s tough to get Brian to give an opinion on the weather.”

He called the typical reliance on anecdotes in reports “the Achilles’ heel of human rights and international religious freedom issues.” The hard numbers offered in these reports make a difference. “Some representatives of particular religious groups overseas are given to exaggeration. But the combined weight of these two reports is to make it clear that there is a global crisis,” said Thomas Farr, director of the Religious Freedom Project at Georgetown University’s Berkley Center for Religion, Peace, and World Affairs, and the first director of the State Department’s Office of International Religious Freedom. “It is a pervasive social pathology.”

Supporters of religious freedom say they can put Pew’s consciously non-advocacy work to immediate use. It is already bolstering their calls for more tolerance in matters of faith. Sue Gunawardena-Vaughn, the senior program manager for international religious freedom at Freedom House, said, “It’s a treasure trove of information that helps with our advocacy.... It’s such a confirmation of our findings on the ground.”

The Pew approach to investigating matters of faith globally has avoided tripping the field’s shallowly buried landmines. When the State Department, the U.S. Commission on International Religious Freedom and other institutions issue

reports, the angry reaction from some governments and religious organizations is virtually automatic. Government-sanctioned religious groups in China termed the State Department’s most recent report, unveiled in September 2011, a “smear” that interferes in its internal affairs. Saudi Arabian commentators criticized the State Department as acting like “world police” and trying to impose Western values. Vietnam said the department’s report relied on “biased” and “erroneous” information. In contrast, Grim was invited to present findings from the research in venues ranging from the Vietnamese Embassy in Washington, DC, to Peking University Law School in Beijing.

By avoiding prescriptions and sticking with what can be quantified, Pew’s social-science approach tends to avoid exciting political and religious emotions. And it appears to be getting a hearing inside some of the governments routinely pegged as violators of religious rights, advocates say. “Among elites and officials, social science arguments have more clout,” said Dennis Hoover, a colleague of Seiple at the Institute for Global Engagement. “It’s not seen as some cultural agenda.”

Grim thinks the work “provides people with a new language to discuss religious issues.” Pew’s innovation to separate and quantify social hostilities related to religion from government actions has also strengthened its appeal overseas.

“Previously, scholars only paid attention to the state’s role in regulating religion. Now, Pew’s report adds one factor: social hostilities. It is more objective than before,” said Yunfeng Lu, a sociologist at Peking University. Roman Lunkin, a research fellow at the Russian Academy of Sciences, also credits Pew with following an “objective scientific approach.” He said that Pew’s global perspective “helps for religious science to come out of the national ghetto.”

The Pew project is helping to mainstream the field of religious freedom studies abroad. In Europe, the strong secularization of both academic and national political cultures, along with a lingering sense that religion was a catalyst for centuries of conflict on the Continent, has slowed advances in the field. The European Union is only now considering whether to consider religious freedom in its foreign-policy making.

In this way, the Forum is playing an even larger role with its research. “Its work,” said Cole Durham, director of the International Center for Law and Religion Studies at Brigham Young University Law School, is furthering “a kind of a renaissance of religion studies.” ■

THOMAS OMESTAD, the former diplomatic correspondent for *U.S. News & World Report*, is a National Press Club award-winning writer based in Washington, DC.

Philanthropic Partnerships Leading the Charge on Clean Energy Solutions

BY JANICA LOCKHART

There are few challenges more important—or opportunities as great—as the transition to a clean energy future.

The economic opportunity to grow jobs and businesses in this rapidly expanding sector, the national security concerns stemming from our current energy use and the need to protect our environment and avert catastrophic climate change are entwined.

Americans agree. A November survey by the *Washington Post* and Pew's independently operated subsidiary, the Pew Research Center, found that despite some erosion in support in the wake of the bankruptcy of the solar energy company Solyndra, 68 percent of the public favors increasing federal funding for research on wind, solar and hydrogen-energy technology.

Pew has been uniting diverse partners around clean energy policies for more than two decades. (See related story, page 34.) We have supported policy reforms at the state level that have helped spur energy efficiency and established renewable portfolio standards in more than half of the states, as well as the first federally mandated increase in fuel-efficiency standards for cars and light trucks in more than 30 years.

Now the Pew Environment Group and its partners are advancing policies that increase fuel econ-

omy, encourage adoption of electric vehicles, ensure that the electric and industrial sectors are cleaner and more efficient, and foster innovation through expanded research and development. These challenges are significant, and engaging partners willing to collaborate and pool resources and expertise will be critical to meeting them.

It was in the spirit of such collaboration that Pew hosted an October event at the Hoover Institution at Stanford University, "Accelerating Clean Energy: A Forum on the Intersection of Innovations and National Security." Attended by philanthropists, foundation and business leaders, investors and the public, the forum featured clean energy entrepreneurs and technologists who work with the Department of Defense, a U.S. Marine major general and senior statesmen. The gathering addressed two specific goals: accelerating the clean energy economy and enhancing national security.

The forum was one of more than 100 events held across the country by the Pew Project on National Security, Energy & Climate to raise public awareness of the security risks associated with the country's reliance on fossil fuels. By working with veterans, national security experts, military contractors and others, the coalition is recasting the

conversation on energy and working to garner bipartisan support for policies that promote the clean energy economy.

"I really appreciate Pew bringing the academics, industry and the military together so we solve the strategic problems that our nation needs to solve now," said keynote speaker Major Gen. Anthony L. Jackson, who commands seven Marine Corps bases and stations.

For Jackson and others in the U.S. military, advancing clean technologies is critical to protecting troops. More than 3,000 members of the military and contractors were injured or killed while protecting fuel convoys in Iraq and Afghanistan between 2003 and 2007. In 2010 alone, there were 1,100 attacks on fuel convoys.

Mindful of the costs in lives and taxpayers' dollars, the Defense Department increased investments in renewable resources from \$400 million to \$1.2 billion between 2006 and 2009, according to a recent Pew report, *From Barracks to the Battlefield: Clean Energy Innovation and America's Armed Services*.

"If you have never seen the mixture of blood and sand, it's a harsh purple on the desert floor," said Jackson. "For every 50 trucks we put on the road, we know that someone is going to be killed or lose a limb."



Top: Major Gen. Anthony L. Jackson talks about the nexus between clean energy and national security. Above: John Warner, Tom Steyer discuss how to advance the clean energy economy.

Former secretary of state George Shultz, now a distinguished fellow at the Hoover Institution, echoed Jackson's concerns during the forum discussion with former U.S. senator John Warner (R-VA), who also served as Navy secretary and is now a senior Pew adviser.

"President Eisenhower worried in the 1950s that America was asking for trouble if we imported more than 20 percent of our oil," Shultz noted. "And when the oil embargo hit us in 1973, I remember thinking that President Eisenhower had been on

to something. I've been concerned about this issue ever since."

By investing in Pew's work, partners can play a pivotal role in advancing policies that will save military lives and help keep the country safe while also advancing the clean energy economy.

"Collaboration allows Pew and its partners to make a greater impact in clean energy solutions, benefiting the U.S. economy, our national security and the environment," said Phyllis Cuttino, director of Pew's Clean Energy Program. "The U.S.

can lead the clean energy revolution, and we need to. It's an exciting emerging economic opportunity."

Entrepreneur Tom Steyer and other guests at the event agreed on the urgent need for broad cooperation. Founder of Stanford's Steyer-Taylor Center for Energy Policy and Finance, he led the 2010 campaign that defeated Proposition 23, a legislative measure that threatened California's efforts to reduce greenhouse gas emissions. Steyer said coalitions are key to unlocking the potential that clean energy holds.

"We need to bring new and diverse voices into the fold, so we can continue to move toward an advanced energy economy that creates jobs and increases economic growth," he said.

Sally O'Brien, managing director of Pew's Philanthropic Partnership Group, noted that the experience and expertise in Silicon Valley would be essential to further progress. Energy trailblazer K.R. Sridhar, for example, has pioneered research in fuel cell technology for NASA's Mars program and recently established Bloom Energy, which creates parking-space-size boxes that convert renewable or traditional fuels into electricity to power buildings.

"The problem of America's dependence on fossil fuels is too vast for any one organization to solve alone," said O'Brien. "We can be stronger and more effective when we bring our collective resources and expertise to bear on such issues, and Pew is committed to fostering collaboration to promote a significant and lasting impact in the clean energy sector." ■

JANICA LOCKHART is a writer for the *Philanthropic*

Kindergarten Is Old School

Using growing research on the effectiveness of early education, Pew and its partners built a movement that helped expand pre-kindergarten programs around the nation.

BY TIM WARREN

In 2000, pre-kindergarten education in the United States was seen by many as little more than assistance for working parents—child care by another name. Thirteen states offered no public school pre-kindergarten at all and only five offered programs that met at least 8 of 10 significant benchmarks for quality.

Yet expanding research showed that these early years could be times of essential learning, having an impact not only on the development of millions of young children but also in America's ability to educate its people and remain competitive in the global marketplace.

The research had not been widely circulated, but at The Pew Charitable Trusts it attracted the attention of Susan Urahn, then director of education programs. "The evidence was strong and compelling that early learning programs can help children develop the cognitive, social and emotional skills necessary for success in school and in life," said Urahn, now managing director of the Pew Center on the States. "We were convinced that pre-k was the right policy at the right time."

That belief launched a Pew initiative to shape and accelerate the growth of high-quality, state-funded pre-k programs. A decade later, funding for pre-kindergarten nationally has doubled, to more than \$5 billion, and children

enrolled in early education programs increased from 700,000 to 1.3 million. Over the years, Pew's efforts, led by its Pre-K Now campaign, expanded into 30 states, using coalitions that included advocates, business leaders, law enforcement groups, faith-based organizations, physicians, education stakeholders, and national and state policy makers.

Today, 10 states have expanded access to pre-k to all 4-year-olds. Three of the original 13 states without programs now have pre-k, and 23 states and the District of Columbia meet 8 of the 10 essential criteria for quality.

"Pew wanted people to think of pre-k as part of public education," said Marci Young, the campaign's director. "Ten years ago, people didn't see that connection. Pre-K Now's efforts changed that.

"What kids learn in pre-k sets the foundation. They learn not just letters and numbers, but how to learn. They develop skills like persistence, working through challenges, developing focus, how to work with and get along with others. These are fundamental to building strong cognitive skills over a lifetime."

Early on, the campaign took a measured, pragmatic approach, emphasizing the many advantages of early education to specific audiences of potential supporters. To policy makers, it highlighted pre-k's role in narrow-

ing or preventing student achievement gaps and its return of as much as \$16 in benefits for each taxpayer dollar invested. To law enforcement groups, it cited research indicating youngsters who had participated in quality pre-k were less likely later on to indulge in criminal behavior. To business groups, Pew stressed that pre-k could help develop a skilled workforce needed to compete in a global economy. Sara Watson, the initiative's first director, has continued to tout the long-term benefits of pre-k at meetings of business leaders sponsored by Pew's Partnership for America's Economic Success, which she now heads.

"We wanted this campaign to be about specific, practical steps, not just a vision," said Libby Doggett, who oversaw the campaign for the longest period. "Our campaign had three underpinnings: research, communication and advocacy. And most of our partners were really smart state advocates. That was important because we needed partners who were focused and could be very strategic."

Sustaining momentum for 10 years, she said, meant "building effective coalitions at the state level. There was a lot of attention to helping partners learn from each other and bringing new resources and more sophisticated tactics to their efforts." Among other things, Pew helped advise advocates in the use of online communications and lobbying state legislators.

"The main thing was constant re-analysis of the steps to achieve the campaign objective," Watson said. "The overall goal never changed, but there were a lot of ways to get there. If one road was blocked, what was the other road? If the opportunity closed in one state, we went to another."

 To learn more about early education go to www.pewcenteronthestates.org/prek



In the 10 years since Pew began its campaign, funding nationwide for pre-kindergarten doubled, to more than \$5 billion.

“Our campaign had three underpinnings: research, communication and advocacy. And most of our partners were really smart state advocates.”

—Former Pre-K Now director Libby Doggett

In October, the campaign marked its 10 years in the field with a capstone event in Washington, DC. The gathering also highlighted the campaign’s final report, *Transforming Public Education: Pathway to a Pre-K-12 Future*, which among other things offered recommendations on how to make pre-k a fully integrated part of the nation’s public education system. In a cover story on the pre-kindergarten movement, *Time* magazine quoted heavily from the report and credited Pew, which is closing the campaign at the end of 2011, with bringing “a lot of progress” to the cause. (See related story, page 35.)

Gov. Peter Shumlin (D) of Vermont,

who in May 2011 had signed legislation removing restrictions on the number of state students who could enroll in pre-k, was among several speakers at the event who praised Pew’s role. Early education, he told the crowd, is “about having a workforce for the 21st century, it’s about allowing states to balance budgets and spend dollars on smart investments.”

Watson, who had spent a decade watching the growing interest in early education, was amazed. “When I heard the governor of a state talk like that about pre-k, I knew we had come a long way,” she said.

Pew president and CEO Rebecca W.

Rimel told the gathering that the pre-k campaign became a model for others within the Pew Center on the States and elsewhere in the institution. “This approach—to come armed with the facts, have select states lead the charge for reforms and build momentum for others to follow—proved enormously successful,” she said, adding that it “has served as a major source of inspiration for us all at Pew.”

“Pew helped change the way people thought about pre-k and built champions from both sides of the aisle,” said Jason Sabo, senior vice president of public policy at United Ways of Texas, a partner in the campaign. “It put the power of research to work and showed that investing early pays off for kids and for society.” ■

TIM WARREN is a contributing editor to *Trust*. His work has appeared in *Smithsonian*, *Washingtonian*, the *Washington Post* and elsewhere.

Return on Investment

The Pew Charitable Trusts' program investments seek to improve policy, inform the public and stimulate civic life through operating projects managed by Pew staff; donor partnerships, which allow us to work closely with individuals or organizations to achieve shared goals; and targeted grantmaking. The following highlights some recent Pew work. Additional information is available at www.pewtrusts.org.

THE ENVIRONMENT

Australia Proposes Large Marine Sanctuaries

The Australian government released a draft plan for marine parks in the South West region that would include a 124,471-square-mile marine sanctuary. It would be the largest in Australia, twice as big as the Great Barrier Reef sanctuary zones and the third largest in the world. The plan also includes smaller sanctuaries and a large network of marine parks in which major destructive activities will be restricted or prohibited. **Wild Australia's South West** campaign actively worked to build public support in the lead-up to the draft plan's release.

Proactive Plans Protect Fish in the Southeast

The Gulf of Mexico and U.S. Caribbean fishery management councils approved wide-ranging plans to prevent

overfishing. For the first time, science-based fishing limits were set to protect more than 100 species. The plans are designed to keep relatively healthy species from dropping to dangerously low levels. The Gulf of Mexico council also approved a rescue plan for the gag grouper that calls for significant cuts in catch levels and a much shorter fishing season. Pew's advocacy efforts included generating support from coastal businesses and news stories, as well as providing detailed recommendations in testimony and comment letters.

Pew Reports on Military's Clean Energy Efforts

Pew's **Clean Energy Program** released the report *From Barracks to the Battlefield: Clean Energy Innovation and America's Armed Services*. It details efforts across the U.S. Department of Defense and its service branches to deploy energy-efficient and renewable-energy technologies

at military bases, to develop more efficient vehicles in order to reduce the demand for battlefield fuel and to use advanced biofuels as an alternative to petroleum fuels. The department is the nation's largest institutional consumer of energy.

Shark Successes

From the South Pacific to the Americas, momentum is growing for establishing shark-sanctuary designations:

- The Republic of the Marshall Islands became home to the world's largest shark sanctuary. The Marshall Islands' parliament unanimously passed legislation ending commercial fishing of sharks in all 768,547 square miles of the central Pacific country's waters, an ocean area four times the landmass of California. Pew staff testified at hearings leading up to the law's passage.
- Eight countries launched a high-level coalition committed to developing sanctuaries that would end commercial shark fishing in their national waters. A Pew-organized event coincided with the opening session of the United Nations General Assembly, in which these nations participated, and featured the president of Palau and representatives from the Bahamas, the Maldives, Colombia, Honduras, the Marshall Islands, Mexico and the Federated States of Micronesia.
- At the Pacific Islands Forum Leaders Meeting, the minister of foreign affairs, Faipule Foa Toloa, announced the designation of Tokelau's waters as a sanctuary for marine mammals, turtles and sharks, protecting these species in more than 115,800 square miles of ocean.



Catch limits were approved in the Gulf of Mexico and Caribbean Sea.

New Commitments to Address Pirate Fishing

The leaders of the U.S. and European Union agencies responsible for fisheries management signed an agreement committing the two governments to crack down on worldwide illegal fishing. The United States and the European Union are two of the world's three largest seafood-importing markets, so this commitment could signal a turning point for the health of the oceans, communities that depend on fish and the majority of fishermen who play by the rules. A Pew statement, which was picked up by several media outlets, spelled out what would need to happen for this commitment to result in real change: create a global registry identifying fishing vessels; develop a global database to collect intelligence about illegal activity; and adopt stricter measures requiring ports to prevent pirate fishermen from off-loading their contraband. Pew reiterated these points in a private meeting with the EU fisheries commissioner, Maria Damanaki, who invited Pew staff to brief her in Brussels about building a global fisheries enforcement system.



Pew has worked to protect the Grand Canyon from new mining claims.

Polynesian Islands Express Support for No-Take Reserves

The **Global Ocean Legacy** made significant strides in advancing the designation of large, no-take marine reserves in the waters of two historically significant Polynesian islands in the southeastern Pacific Ocean. The governing council of Pitcairn Island voted 6 to 1 to endorse the concept of establishing a no-take marine reserve in the waters surrounding this remote South Pacific territory, best known as the home of the descendants of the mutineers on the British royal ship *HMS Bounty*. The campaign also is making progress toward creating a similar protected area around Easter Island in the southeastern Pacific Ocean, working

to secure support from local officials, business leaders, scientists, Easter Island residents and nonprofits, as well as the head of the navy of Chile, which governs the island.

Grand Canyon-Size Win for Wilderness

Interior Secretary Ken Salazar announced that the Obama administration is committed to protecting a million acres from new mining claims around Grand Canyon National Park for 20 years. He also issued a new short-term ban running through the end of 2011 to allow the administration to complete its environmental impact statement on uranium mining on water quality and other resources in the region. Since 2007, Pew has been engaged in a concerted effort to protect the Grand Canyon from new claims.

Preventive Catch Limits Adopted in South Atlantic

The South Atlantic Fishery Management Council, which regulates fishing in U.S. waters from North Carolina to Florida, approved a plan to prevent overfishing of more than three dozen species. The plan sets reasonable limits to keep these populations from dropping. For nearly all of these species, 2012 will be the first time limits have been placed on total



Pitcairn Island, located in the southeastern Pacific, endorsed a marine reserve.

annual catch. Pew staff members submitted comments and testified before the council, secured personal letters from fishermen and gathered more than 40,000 petition signatures in support of this new approach.

IN THE STATES

Four States Ratify Voting Improvements

North Carolina, South Carolina, Tennessee and Texas enacted Pew-supported legislation improving the voting process for military members and civilians overseas, ensuring they will have enough time to receive and submit ballots that will be counted. The laws expand and codify aspects of the federal Military and Overseas Voter Empowerment Act, such as providing electronic transmission of unmarked ballots, mandating that ballots are sent to voters at least 45 days before an election and broadening the use of the back-up ballot, known as the Federal Write-in Absentee Ballot, to state and local elections. Since 2010, the **Election Initiatives** program of the Pew Center on the States has supported efforts to pass bills to protect the votes of service members in 11 states.

Defense Department Expands Water Fluoridation

A memorandum by the assistant secretary of defense for health affairs instructed U.S. Department of Defense facilities that operate water systems serving more than 3,300 personnel to provide optimally fluoridated water. This memo cited tooth decay as “a major problem for military personnel” and noted that fluoridation will “directly reduce



The Department of Defense has called tooth decay “a major problem.”

their risk for dental decay and improve [military] readiness.” Although most military bases have provided fluoridated water for decades, this memo expands fluoridation to more service facilities. The Pew **Children’s Dental Campaign** began working with a senior Defense Department official two years ago on data collection that prompted the decision.

Pew Experts Testify On State Pensions and Retiree Benefits

Pew staff members testified before state legislators in Kansas and Rhode Island about the rising costs of pensions and retiree health care for public-sector workers and about the policy approaches other states have taken to address them. In Topeka, staff members addressed the Kansas Public Employees’ Retirement System Study Commission, a 13-member group appointed by the governor to bring the state into actuarial balance by 2019. The commission will write pension reform legislation that will subsequently be voted on by the legislature. In Providence, Pew staff members addressed the Rhode Island General Assembly as it

prepared to debate the most comprehensive reform bill any state has considered.

New Advances in Public Safety

At a news conference with the Missouri governor, chief justice and legislative leaders from the House and Senate, the state announced its partnership with Pew’s

Public Safety Performance Project to develop policies to protect public safety, control corrections costs and hold offenders accountable. Missouri is the 16th state to receive comprehensive technical assistance from the project. In Florida, the project’s partner **Right on Crime** added former governor Jeb Bush as its newest signatory. The campaign, which was launched in December 2010, has recruited many high-profile conservatives to speak out about the need to be tough on criminal-justice spending.

HEALTH

Pew Works With Industry To Secure Food-Safety Funding for FDA

Pew continued to work to ensure that the U.S. Food and Drug Administration has the resources to implement and enforce the new food-safety law, including efforts that were timed to lead up to a vote by the Senate Appropriations Committee vote. Pew ran ads, jointly funded by the Grocery Manufacturers of America, that cited the growing volume of food imports, and called key

members of the Senate and House appropriations committees. The Senate panel ultimately provided an additional \$40 million above current levels to carry out the new law.

School Meal Improvements Sought

The **Kids' Safe and Healthful Foods Project** took several steps to highlight the need for improved safety and quality of school foods. Its first major congressional briefing featured the release of the project's pilot survey documenting how schools must improve equipment and training in order to serve safer, more healthful meals. A second congressional event focused on the science behind school-meal standards recently proposed by the U.S. Department of Agriculture.

Pew Prescription Project Testimony on Drug Safety

Pew **Prescription Project** director Allan Coukell testified before the Senate Health, Education, Labor, and Pensions Committee at a hearing on U.S. drug safety. He provided an overview of the complex drug-supply chain and urged Congress to help reduce the risks of counterfeit, adulterated and substandard drugs. Several witnesses and lawmakers mentioned *After Heparin*, Pew's report on securing the pharmaceutical supply chain.

Pew-Funded Study Is Published

The medical journal *Clinical Infectious Diseases* published a study conducted by the Translational Genomics Research Institute entitled



“Multidrug-Resistant *Staphylococcus aureus* in US Meat and Poultry.” The **Campaign on Human Health and Industrial Farming** commissioned the research. In addition to finding high levels of the antibiotic-resistant *Staphylococcus aureus* on meat and poultry, the study suggested that food animals were the predominant source of the contamination.

Support for the Health Impact Project

The **Health Impact Project**, a collaboration between Pew and the Robert Wood Johnson Foundation, secured three more funding partners, in part because of the momentum in the field of health impact assessments

and the project's emergence as a national leader. The Blue Cross and Blue Shield of Minnesota Foundation, the California Endowment and the Kresge Foundation will each fund two more health impact assessment demonstrations through the project, in addition to providing administrative resources. These demonstrations will help show how health impact assessments can be used to inform active decisions in communities.

Urging the Development of New Life-Saving Antibiotics

The **Pew Health Group** co-hosted a conference with the Infectious Diseases Society of America and the Pharmaceutical Research and Manufacturers of America, “Reviving the Pipeline of Life-Saving Antibiotics: Exploring Solutions to Spur Innovation.” It brought together leaders from government, industry, academia, medicine and science to discuss the simultaneous increase in serious drug-resistant infec-

A study found high levels of *Staphylococcus aureus* in meat and poultry.



tions and decrease in the development of life-saving antibiotics, as well as to propose and discuss policy and regulatory solutions. Speakers included directors from the U.S. Food and Drug Administration and the Centers for Disease Control and Prevention, and representatives from large and small pharmaceutical companies engaged in antibiotic research and development. In the House of Representatives, Phil Gingrey (R-GA) introduced the Generating Antibiotic Incentives Now Act, which provides provisions to stimulate the development of new antibiotics; the Senate bill was introduced by Bob Corker (R-TN) and Richard Blumenthal (D-CT). The Pew **Antibiotics and Innovation Project** worked closely with the bipartisan group of co-sponsors of the bill.

THE ECONOMY

The Great Debt Shift

Rep. Xavier Becerra (D-CA) used the Pew **Fiscal Analysis Initiative's** Great Debt Shift fiscal fact sheet to explain to the congressional Joint Select Committee on Deficit Reduction how legislative decisions over the past 10 years have contributed to the nation's debt problem. Becerra served on the 12-member committee, which was established as part of the Budget Control Act to propose at least \$1.5 trillion in deficit-reduction measures.

Senators Call for Credit Card Reform

Democratic senators Charles Schumer (NY), Jack Reed (RI), Bill Nelson (FL) and Robert Menendez (NJ) submitted a joint letter to the

Federal Deposit Insurance Corporation urging regulators to increase transparency in credit cards marketed for business or commercial purposes. Their action was the direct result of a report released by the **Safe Credit Cards Project** on business credit cards, which generated considerable media coverage.

PEW RESEARCH CENTER

Demographic Studies Show Groups Affected Differently by Recession

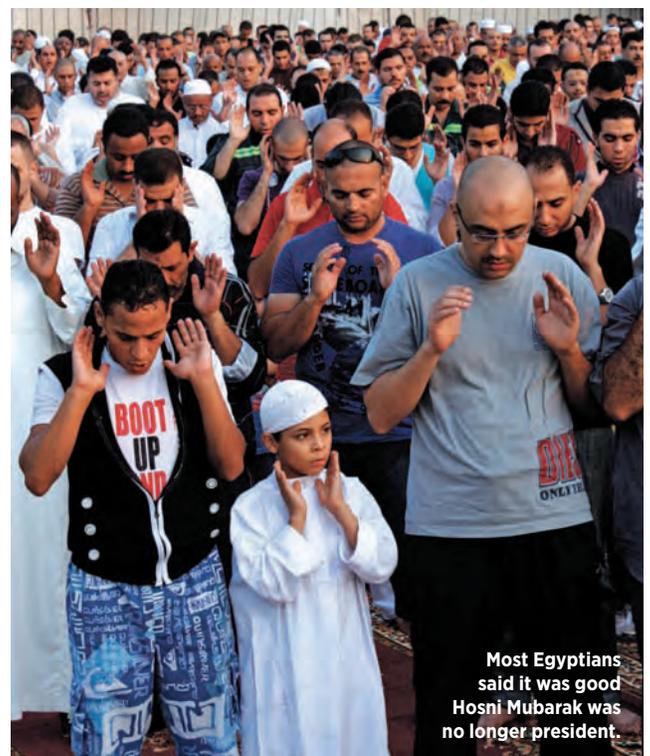
Back-to-back reports from the Pew Research Center's **Social & Demographic Trends Project** shed light on different aspects of the Great Recession and economic recovery. Analyzing gender trends in labor force participation during the two-year recovery, the project found that men gained 768,000 jobs while women lost 218,000 jobs. The current

recovery is the first since 1970 in which women have lost jobs while men have gained them. In a second report, the project found that blacks and Hispanics experienced much more severe drops in household wealth during the recession than did whites, largely caused by plummeting real-estate values. The median wealth of white households is 20 times that of black households and 18

times that of Hispanic households, the largest wealth disparities seen in the 25 years the Census Bureau has been collecting such data.

Pew Research Center Surveys Egyptians

The **Global Attitudes Project** released the results of a nationwide poll conducted in Egypt. Overwhelmingly, Egyptians said it was good that Hosni Mubarak was no longer president. Nearly two in three were satisfied with the way things were going in the country, and most were optimistic about its future. But only 20 percent of Egyptians viewed the United States favorably, nearly identical to the 17 percent who rated it favorably in 2010. By a margin of 54 percent to 36 percent, Egyptians wanted the peace treaty with Israel annulled. The Pew Research Center's director of International Survey Research, Jim Bell, and Pew Global



Most Egyptians said it was good Hosni Mubarak was no longer president.

Attitudes associate director, Richard Wike, also gave a presentation on the findings from the survey at the U.S. State Department.

A Tale of Two Fathers

Based on its own survey data, as well as an analysis of the National Survey of Family Growth, the **Social & Demographic Trends Project** found that the role of fathers in the modern American family is changing in important and countervailing ways. Fathers who live with their children have become more intensely involved in their lives, spending more time with them and taking part in a greater variety of activities. However, the share of men residing with their children has fallen significantly in the past half-century.

Poll Categorizes Voters

The **Center for People & the Press** released its 2011 Political Typology, a long-standing effort to go “beyond red and blue” and sort voters into groups based on their values, political beliefs and party affiliation. On the right, the divide between pro-business conservatives and social conservatives has blurred. On the left, in addition to traditional Democratic groups, the study found a “new coalition” of working-class voters that is in equal parts white, Latino and African American. The middle of the electorate now spans affluent, secular, left-leaning “postmoderns,” right-leaning “disaffecteds,” and economically conservative, socially moderate “libertarians.”



Disapproval from Pakistan

The **Global Attitudes Project** found that most Pakistanis see the United States as an enemy, consider it a potential military threat and oppose American-led anti-terrorism efforts, including the raid on Osama bin Laden's compound. Just 12 percent of Pakistanis expressed a positive view of the United States, and only 8 percent had confidence in how President Barack Obama handles world affairs. Sen. John Kerry (D-MA) cited these low approval numbers in his opening question of Secretary of State Hillary Rodham Clinton during a Senate Foreign Relations Committee hearing to evaluate progress in Afghanistan and Pakistan.

Nonprofit News Sites Not Necessarily Nonpartisan

The **Project for Excellence in Journalism** released an analysis of the growing field of nonprofit news Web sites. The report identifies 46 sites from across the country, all launched in 2005 or later, that offer state and national coverage, and it examines their funding, transparency, organizational structure and coverage. The study found that roughly half of these sites produced clearly ideological news coverage. It also concluded that, in general, the more ideological

sites tended to be funded mostly or entirely by one parent organization, to be less transparent about their funding sources and to produce less content. Sites with a mixed or balance perspective tended to have multiple funders and revenue streams, greater transparency and more content.

PHILADELPHIA

Cultural Data Project Comes To the Nation's Capital

The Philadelphia-based **Cultural Data Project** was launched in Washington, DC, making it the 12th state or region to benefit from the project's management tools and technical assistance. Arts and cultural organizations in the District will join more than 11,600 of their peers around the country in using the Cultural Data Project to improve their operations and report to their funders.

Report Cites Changing Demographics in City

The **Philadelphia Research Initiative** issued a report on the ethnic and racial changes Philadelphia has been undergoing, both citywide and in individual neighborhoods. For example, between 1990 and 2010, Northeast Philadelphia—long a white, middle-class neighborhood—went from 92 percent white to 58 percent white, according to Census data, while gaining population overall. In keeping with national trends, the number of Hispanics and Asians increased substantially in the city. The African American population remained relatively stable as it pushed out from inner-city neighborhoods to areas bordering the suburbs. ■

Who Will Win the Clean-Energy Revolution?

BY PHYLLIS CUTTINO AND MICHAEL LIEBREICH

After less than a year and a half in which so much energy news seemed troubling — nuclear meltdowns, oil spills, rising gas prices — it might be startling to find out that worldwide installed capacity of renewable energy has now surpassed that of nuclear power. In fact, global investment in clean energy, driven by enlightened, forward-looking national policies, grew to a record \$243 billion in 2010, up 30% from the previous year.

Indeed, in less than a decade, clean energy has grown from a niche industry to a significant source of trade, investment, manufacturing, and job creation. Since 2004, annual investment in the sector has increased by an impressive 630%. We need to ensure that this encouraging trend continues.

The emergence of the clean-energy sector reflects rational policies — from research to financing to tariff incentives — in the world's largest economies. These measures, which still pale in comparison to what is granted to conventional fossil fuels, will be reduced over time as economies of scale are realized and costs fall. We are not far from the day when clean energy can compete head to head with coal, oil, and gas.

In many places, wind energy is already competitively priced, and it has attracted almost half (48%) of all G-20 clean-energy investments in recent years, fueling the addition of some 40 gigawatts of generating capacity — enough to power 30 million homes.

But the solar sector is the fastest-growing clean-energy industry, in large part because prices of solar panels have

declined by more than 60% in the last 30 months. By the end of this year, solar modules are expected to cost half as much as they did four years ago. The 17 GW of solar-generation capacity that was added in 2010 from investments totaling \$79 billion could power more than 12.5 million homes.

Geographically, recent research by The Pew Charitable Trusts and Bloomberg New Energy Finance reveals that Europe continues to lead the world in such investment, attracting \$94.4 billion in 2010, a 25% gain over 2009. Investment in Germany more than doubled, to \$41.2 billion, surpassing the United States to take second place globally. Italy was in fourth place (up from eighth in 2009), attracting almost \$14 billion in investment. France entered the world's top ten, after annual investment grew 25%, to \$4 billion. Investment in Spain, meanwhile, was down by more than half, but remains in the top ten worldwide, at \$4.8 billion.

The research also demonstrates that Europe's consistent policies leave it well positioned to compete in the clean-energy sector. Investors want to be sure that there will be ongoing demand for renewable energy. The European Union is providing that certainty through its clean-energy targets, carbon markets, and feed-in tariffs (under which utilities guarantee to pay a fixed rate for clean energy).

For example, European policies are driving an explosion in small-scale, distributed solar-power generation. Investment in these projects doubled

Pew staff members frequently write opinion pieces for newspapers and other media. This article was published in more than a dozen papers worldwide, including the following:

CHINA DAILY

GAZETA WYBORCZA (Poland)

TAIPEI TIMES

DAILY NEWS EGYPT

GUATEMALA TIMES

QATAR TIMES

in 2010, to \$59.6 billion globally, with most poured into the EU — and more than half into Germany alone.

Germany also is demonstrating that sound clean-energy policies can drive not only domestic investment and installations, but also manufacturing and export opportunities. Last fall, Germany's environment ministry reported that renewable-energy jobs had doubled since 2004, to 340,000, thanks to the country's investments in education, training, research, and innovation.

Owing to high prices for conventional energy and abundant sunshine, Italy is the first country to achieve grid parity, or cost-competitiveness, for solar energy. Sixty-two percent of its private clean-energy investment was directed toward small-scale solar projects in 2010. Yet what is striking is that Italian manufacturers have almost entirely failed to carve out a position in this booming sector.

Moreover, Europe's global clean-energy leadership is being challenged by Asia, where private investment, powered largely by China's surge, is growing faster. Indeed, among individual countries, China is the world leader, attracting \$54.4 billion in investment in 2010. In the space of just a few years, China has become entrenched as the leading

destination for private investment and manufacturing of related equipment.

Last year, China added a staggering 17 GW of wind-power capacity, and now produces half of the world's wind and solar equipment, in part to meet its own highly ambitious clean-energy targets, which include deployment of 150 GW of wind power and 20 GW of solar power by 2020. China has already surpassed the US to lead the world in installed clean-energy capacity.

But China is not alone in pushing Asia to the global forefront. India, too, entered the ranks of the top-ten countries for clean-energy investment in 2010.

Moreover, its five-year growth rate for renewable-energy capacity also ranked tenth worldwide, and the country was seventh in terms of installed capacity. With a target of 20 GW of solar generating capacity by 2020, investment in India could grow rapidly.

The events of the past 15 months — starting with the Deepwater Horizon oil spill in the Gulf of Mexico, followed by the violence in North Africa and the tragedy in Japan — confront the world with a stark choice between the costs and risks of traditional energy sources and the promise and progress of clean energy.

In recent decades, Europe has been a driving force for energy modernization. In the years ahead, such leadership will be needed to help capture the economic, environmental, and security benefits of renewable energy. Reaffirming its commitment to rapid decarbonization of its energy system, and to creative policies in support of that goal, will help Europe continue to reap the rewards of one of the most remarkable new market opportunities in living memory. ■

PHYLLIS CUTTINO is Director of the Clean Energy Program at The Pew Charitable Trusts. MICHAEL LIEBREICH is CEO of Bloomberg New Energy Finance.

Re-Thinking Pre-K

BY KAYLA WEBLEY

Take two kids, one from a low-income family, the other middle class. Let them run around and do little-kid things in their respective homes and then, at age 5, enroll them in kindergarten. Research shows that when the first day of school rolls around, the child from the low-income household will be as many as 1.5 years behind grade level in terms of language and prereading and premath skills. The middle-class kid will be as many as 1.5 years ahead. This means that, by the time these two 5-year-olds *start* school, the achievement gap between them is already as great as three years.

When you look at findings like this, it's not hard to see why educators and government officials believe so strongly in the need for early-childhood education, particularly for low-income children. A half-century's worth of data has shown that reaching kids early helps them avoid repeating grades in elementary school, stay on track to graduate high school, earn more money as adults and spend less time in prison or on welfare. Recent studies have also pointed to third grade as a critical benchmark — if children are not performing at grade level by then, they may never catch up — making the years leading up to that point increasingly important.

And yet early-learning programs, because of the way they are financed and administered, are not part of the

An excerpt from *Time* magazine, Sept. 26, 2011. For more on the program go to www.pewcenteronthestates.org/pre-k.org



entrenched educational system in most of the U.S. The vast majority of states are not required to offer preschool, and some states have no pre-K programs at all. Many of the states that have long championed

preschool still decide from year to year how many children get to attend, and the waiting lists of qualified kids are long — and sad.

All of this helps explain why the nonprofit Pew Charitable Trusts has invested 10 years — and some \$100 million — in studying preschool and spearheading a movement to get states to offer more of it and in smarter ways. The initiative, called Pre-K Now, has made a lot of progress. The total amount that states spend on preschool has more than doubled in the past decade, enrollment nationwide has increased from 700,000 4-year-olds in 2001 to more than 1 million today, and three states that had no preschool programs 10 years ago (Alaska, Florida and Rhode Island) have joined the pre-K club. And despite the Great Recession, six states and the District of Columbia have opened their pre-K programs to all 4-year-olds, bringing the total number of states that offer universal pre-K to nine, plus D.C. ■

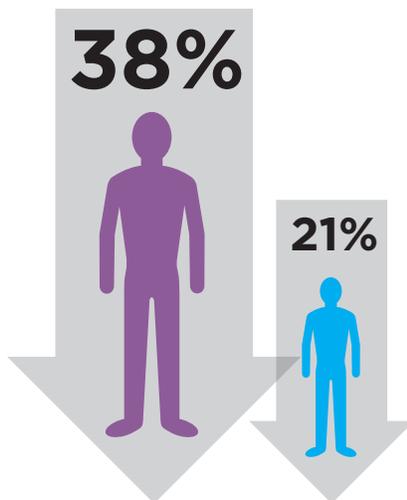
Falling From the Middle

A report by the Economic Mobility Project of the Pew Center on the States found that a third of Americans who grow up in the middle class fall out of that category as adults. *Downward Mobility from the Middle Class: Waking Up from the American Dream* cited such factors as family

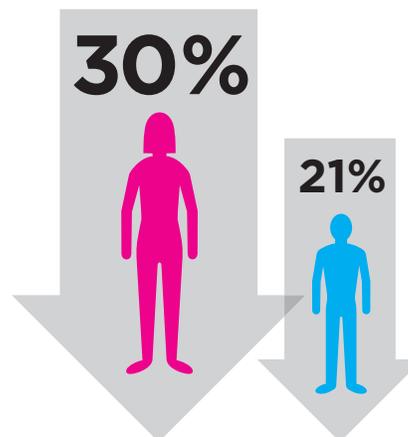
background, marital status and education for this drop. The report revealed that black men are much more likely to fall out of the middle class than white men, and it found a disparity in downward mobility between white men and white women.



Discrepancy between **black men** and **white men** who fall out of the middle class.

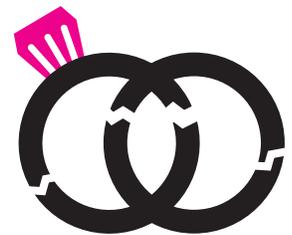


Discrepancy between **white women** and **white men** who fall out of the middle class.



16 Percentage points by which women with a high school diploma or less are more likely to drop out of the middle class than women with a college degree.

13 Percentage points by which men with no more than a high school diploma are more likely to leave the middle class than men with some postsecondary education.



36 Percentage points by which divorced, widowed, or separated women are more likely to fall from the middle class than married women.

13 Percentage points by which divorced, widowed, or separated men are more more likely to fall from the middle class than married men.

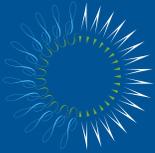
For more on the report and on the Economic Mobility Project, go to economicmobility.org



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“If you operate a plant that manufactures drugs or their ingredients in the United States, you can expect an FDA inspector to visit every two or three years. If you run a similar plant overseas, you can expect an FDA inspector to visit maybe every nine years, the stated average. Some plants may never be inspected.”

—from “A Better Prescription for Drug Safety,” page 14

PHOTOGRAPH BY GORDON FAIRCLOUGH/WALL STREET JOURNAL

