HOT TOPIC

YOU CAN'T MISS THE BUZZ ABOUT GLOBAL WARMING

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As global warming is finally catching the attention of the general public, and it is certainly one of today's hottest themes for the planning professionals, Focus decided to reprint Ruth Knack's article which first appeared in the APA's Planning magazine. It is a strong reminder that climate change and global warming is pushing the world towards a new development paradigm that will redefine the future of cities.

What a difference a year makes. Last summer, when this magazine ran its first story on global warming, there were still many doubters, and planners seemed only vaguely interested. "For most planners this issue simply does not resonate," says Kenneth Topping, FAICP, a former Los Angeles planning director who has become an expert on hazard mitigation.

Why? "Because planners are fundamentally optimists," Topping says. "They don't like to think about negative scenarios." But after the tsunamis, hurricanes, cover stories in *Time* and *Vanity Fair*, and most

important, *An Inconvenient Truth*, former Vice President Al Gore's book and film, with its dramatic images of melting polar ice, heads have come out of the sand.

"Katrina elevated the issue for everyone," Topping says. "We recognize now that no community is immune from disaster," made more imminent by the steady increase in carbon dioxide emissions—the main cause of global warming. "What went wrong on the Gulf Coast could go wrong elsewhere," he says.

What can we anticipate from a planning perspective? Topping asked at a forum on globalization at the last APA conference. The answer: sea level rise, coastal erosion, flooding, drought, urban heat zones, and agricultural disruption.

Movie makes point

"My mission is to change the minds of the American people," said Vice President Al Gore on the *Charlie Rose Show* in June, "so that they recognize the danger before it's too late."

"This movie should be required for all planners," says Ingrid Kelley, program manager of the Energy Center of Wisconsin in Madison, and chair-elect of APA's Environment, Natural Resources, and Energy Division. "His point was to wake people up to the basic issue, and he did that very well. It's up to us to pick up the ball and run with it."

Sarah James, a planning consultant in Cambridge, Massachusetts, and coauthor of *The Natural Step for Communities*, agrees. "We may look back on 2006 as the year when this subject came on the public radar screen in this country. And I think this movie will have had a lot to do with that," she says. "It gives us the grimmest aspects of the effects of global warming. But it also gives examples of things that are moving in the right direction."

Iceberg in Miami Beach?

The city commission in April approved the idea of placing "The Drift," a \$500,000 steel and marble sculpture by Inigo Mangano-Ovalle, in a renovated South Pointe Park. The artist says the 12-foot-high piece, part of the city's public art program, is based on an actual arctic iceberg.

But lowering the carbon number will not be enough, James says. “We’re also going to have to stop gobbling up the land with our sprawling land-use patterns, and stop depleting water all over the planet. And we’re going to have to find ways of meeting our human needs more efficiently—and more fairly.”

James was part of the task force that guided the development of APA’s Planning for Sustainability policy guide. She notes that the guide is a good starting point for action on global warming. Its first objective is “to encourage planning approaches that reduce dependence on fossil fuels and other underground metals and minerals.”

In short, she says, “we already know what we’re supposed to do. Now we have to redouble our efforts to help decision makers in our communities to understand the local consequences if we don’t act.”

Several cities, including Duluth, Minnesota, and Portsmouth, New Hampshire, have officially adopted the “natural step framework,” the ecological program that the APA objectives are based on. Portsmouth has created training workshops for department heads, who are informally using the APA sustainability objectives to guide decisions, James says.

James and coauthor Torbjorn Lahti are now in the process of developing a training institute for communities. “Global warming will definitely be part of the curriculum,” she says.

Short attention span

Paul Wack, AICP, who teaches city and regional planning at Cal Poly in San Luis Obispo, had just returned from the United Nations World Urban Forum when we asked him if he had seen the Gore film or read the book. “I have read the book, but I haven’t yet seen the film although I am assigning it for a film class I’m teaching this summer,” he said. “I do think his ideas are pretty well on the mark.”

Wack says he is concerned that Gore could use the film as a stepping-stone for another run for the presidency. “If he does,” he says, “the global warming message could get lost in the politics.” In Wack’s estimation, that would hurt Gore’s credibility—and the credibility of the whole climate change movement.”

“Some of my students who have already seen the film say they received a handout titled ‘10 Things You Can Do,’ which is taken from the book. It lists simple actions that individuals can take: change a light bulb, drive less, recycle. They’re all the things that we already know, but people are finally starting to pay attention.”

The publicity surrounding the Gore film prompted some broader musings. In 1972, Wack recalls, urban economist Anthony Downs published an essay called “Up and Down with Ecology.” In it Downs talks about a phenomenon called the ‘issue attention cycle,’ which Wack explains this way: “An issue is bubbling under the surface and momentum builds. You

“It’s Al Gore.”

Paul Wack at the Rocky Mountain Institute headquarters in Snowmass, Colorado.

know we've got to do something about it. But then people realize what it will cost and interest wanes." The point is that our attention spans really are pretty short.

"And the same thing could be happening today," Wack continues. "Global warming [or climate change, the term he prefers] used to be pretty obscure to most people. But now, thanks to the April 3 *Time* magazine cover, we've got that image of a polar bear on a shrinking pile of ice. People can relate to that. How long will their interest last?"

Wack represented APA's International Division in June at the U.N. forum in Vancouver. "It focused on the fact that the global population—poverty too—has become more urban than rural for the first time in human history," he says. "And of course that's having all sorts of impacts on land use (notably the destruction of the rain forest and the dangers to coastal communities caused by rising sea levels).

"How are you going to armor all the airports and the sewage treatment plants and ports to deal with the rising oceans? We're sitting here with that time bomb waiting to blow up," he says. "And that gets us back to planning. We need to start thinking ahead and looking beyond our own little jurisdictions. We've got to understand that everything on this planet is interrelated to everything else—the old first law of ecology."

Wack says his planning students are ready to meet the challenge. "They want to start addressing these issues. Many of our students are interested in the green building movement, and more and more of our graduates are becoming LEED-accredited.

"We've got a whole generation of planners coming up that already gets it. They're aware of the danger, and they're ready to move on it, because it's their future that's at stake. Most of the impact of climate change is going to be happening on their watch. That's why they're concerned. It gives me hope, actually."

Ahead of the pack

In May, Diane Sugimura, the director of Seattle's Department of Planning and Development, took part in a panel on planning for climate change sponsored by the University of Washington's Northwest Center for Livable Communities. "We talked about the potential impact of climate change on the region, and what we as citizens, planners, and policy makers can do to help protect its livability," she says.

"So, yes," says Sugimura, "Seattle is definitely concerned about global warming, and the planning we've been doing for over a decade shows that. The comprehensive plan we adopted in 1994 focuses on concentrating development in urban centers and on preserving our rural lands and forests.

"We were the first city in the U.S. to make a commitment to use LEED (Leadership in Energy and Environmental Design) standards for public buildings. And we just adopted a new downtown zoning code that gives private developers a zoning bonus if they build to LEED silver standards. Also, this summer we will release an urban forest management plan that's aimed at significantly increasing our tree canopy."

In February 2005, Seattle Mayor Greg Nickels contacted mayors throughout the U.S., challenging them to "meet or beat" the targets set by the Kyoto Protocol, the international agreement to cut carbon emissions that the U.S. has refused to sign. "As of July 7, 262 mayors from 43 states had accepted the mayor's challenge," Sugimura says.

Education is a large part of Seattle's program. A local lecture series, the Urban Sustainability Forum, features speakers like Svend Auken, a member of the Danish parliament and a former Minister of Energy

and Environment. “We had 900 people on a Friday evening listening to him tell how Denmark freed itself from its dependence on imported fuel,” she says.

An idea borrowed from Sweden is the “green area factor,” which allows home owners and developers greater flexibility in meeting landscaping requirements. “Somebody could get credit for a green roof, for instance, or for a tree canopy,” says Sugimura.

A current focus is to convince mortgage lenders to value green building. “We are working with a national group to attempt to change the underwriting criteria,” she says.

Tipping point

“I think we’re at a tipping point now,” says Michael Replogle, echoing Gore’s words in his film and book. “It’s a useful concept,” he says.

“The film reinforces the fact that there is an overwhelming scientific consensus that climate change is real.” At the same time, says Replogle, transportation director for the national nonprofit, Environmental Defense, he is somewhat disappointed that Gore did not spend more time on solutions.

“We’re putting this planet under huge stress right now and it’s human activities, many of them driven by planning decisions, that are doing that. But those same decisions can become a big part of the solution.

“The evidence is in,” he continues. “We must reduce our greenhouse emissions by up to 80 percent if we’re going to stabilize our climate. But there are no magic bullet solutions. We can’t solve this problem just with clean power plants, or by switching to low-carbon fuels, or by banking on hydrogen. It’s going to take a lot of one percent solutions adding up to a bigger thing over time.”

What we do know, he says, is that transportation and community design are major factors in energy use. “We have to learn to manage travel demand, which has been growing at more than one percent a year per capita. And that, in turn, means both smarter growth and smarter transportation choices.

“Where proposals for new freeways and toll roads are being put forward, for instance, we need to be sure that we are doing all we can to operate the existing transportation system efficiently before we invest in costly new capacity that will simply spur more travel. That means using tools like time-of-day congestion charges and bus rapid transit.

“We’ve got some strong evidence coming out of London and Stockholm and Singapore—and some U.S. cities—that the public will accept tolls on existing roads if they get good value and performance as a result,” he says. “We’ve seen traffic congestion drop significantly in those cities.”

Replogle also sees opportunities for more efficiency in a linked, intermodal system where network pricing plays a key role and in a viable cap-and-trade system (which is part of the Kyoto framework for climate change management) to manage greenhouse gas emissions.

He sees a major disconnect between local land-use planning, state and regional transportation planning, and the global situation. “We’ve got these state climate action plans and regional greenhouse gas initiatives, which are a good start, but only a start. We need enforceable emission caps allocated to states and regions, like the strategies put in place by the Clean Air Act to manage smog pollution.”

Diane Sugimura with a “Smart Car” in Malmö, Sweden, a stop on an International Sustainable Solutions study tour.

We're not there yet, but Replogle is relatively optimistic. "I think we're at the edge of a paradigm shift," he says, "when these kinds of things are going to matter a lot more." Meanwhile, he says, "we need to seek out the best practices, wherever they are, and work with others—including other nations—to adapt to a world in which climate matters. I think we're all looking to find our way on this."

And that's where planners come in. "I think planners have a role to play in everything from providing affordable infill housing in areas that have lots of jobs and not enough housing, to paying closer attention to how transportation investments will affect long-term travel consumption," Replogle says.

Even more important is planners' ability to help people see that small things add up to bigger outcomes over time. "The quick fix often peters out after a few years when the technology you're using becomes obsolete. But changes in the built environment are long lasting. Creating a development around a new transit station changes the DNA of a metropolitan area," he says, "and that goes on for generations."

Like the Iroquois Indians of old, he adds, planners need to be thinking about the impacts of what they do as far forward as the seventh generation. "If we as planners don't do that, who will?"

What to do?

Frederick Steiner, dean of the School of Architecture at the University of Texas, has thought long and hard about what planners and builders can do, including in hot climates like his. "For starters," he says, "if you're trying to get people to take this really seriously, start talking about 'global climate change' rather than 'global warming.' That's because some places on the planet will actually cool—and that causes confusion, which the naysayers can exploit. Also, explicitly include the urban heat island effect. It's closer to home, and even the skeptics accept the fact that our cities are heating up."

Then, says Steiner, start thinking about the buildings you allow in your communities. He notes that, according to Edward Mazia of the University of New Mexico, buildings are responsible for roughly 46 percent of all carbon dioxide emissions annually in the U.S. (roughly double any other producer including transportation and industry) and around 48 percent of all the energy consumed.

Greenhouse gases and energy are linked, he adds, because as energy demand goes up so do emissions from power plants, especially coal-fired plants. Air conditioning in warmer climates and heating in cooler ones increase energy use and contribute to the problem.

"Start thinking about the buildings you allow in your communities", says Frederick Steiner.

"Planners should be working with architects and structural engineers to revise building and zoning codes both to reduce emissions and to lower energy use. As part of Austin's Green Builder Program, the city's energy company offers incentives to builders and architects to build greener buildings. It's also investing in wind power as an alternative energy source."

Planners should also encourage city and county officials to adopt the U.S. Green Building Council's new Neighborhood LEED standards, which provide a model for revising existing subdivision regulations and neighborhood plans.

"While current LEED standards are weak at the site scale, that could change," he says. "The American Society of Landscape Architects has teamed up with the Lady Bird Johnson Wildflower Center at the University of Texas to develop new site standards to encourage energy reduction."

Roofs are another area of concern. "Dark roofs absorb more heat than lighter colored ones. In the 1970s, Davis, California, adopted an ordinance encouraging lighter colored roofs. Another option is to create green roofs. See Chicago's City Hall for a model," he says.

Most important perhaps are streets and parking lots. "Black asphalt and concrete absorb the sun's light during the day and reradiate its heat, especially at night. We can narrow the width of streets and the size of parking lots, reducing the amount of paving and saving money as well."

Finally, says Steiner, "we need to preserve green spaces and create new ones. Green spaces help to cool our cities and reduce energy demand. (Using native plants requires little irrigation.) Planners have long played a key role in preserving farmlands and creating parkland. But the challenge of global climate change calls for new ways of greening the city. New York City's High Line Project is a terrific example of such innovation."

In the works

Little Rock planning consultant Christie McGetrick, AICP, is a longtime member of APA's Legislative and Policy Committee. She's also a global warming watcher. "I've been stirred up about it for a long time," she says. "I believe it when Al Gore says we can't stop the warming process but we can slow it down. But first we have to pay attention."

McGetrick is one of a number of planners who would like to see an APA policy guide on global warming. "It should focus on what planners in the U.S. can do," she says, "but it might also have input from planners in other countries, since this is obviously an international problem." A new guide must also make clear how its recommendations can be translated into legislation and regulations, she adds.

"Katrina really made me think," says McGetrick. "So much of what happened could have been avoided with better planning. We didn't have to destroy the wetlands, and the levees could have been built to last."

What would happen, she wonders, if a global warming-induced catastrophe overtook her own state of Arkansas ("not the most planning-advanced state in the union"). "I see a lot of poor land use and more and more highways, and very little control of emissions," she says.

Resources

10 things to do to stop global warming: Change a light, drive less, recycle more, check your tires, use less hot water, avoid products with a lot of packaging, adjust your thermostat, plant a tree, be a part of the solution, spread the word. From *An Inconvenient Truth*, by Al Gore (2006; Rodale Press; 352 pp.; \$21.95). Website: climatecrisis.net

In Planning. "Heat Wave," by Kristin Choo, appeared in the August/September 2005 issue. Ken Topping's viewpoint on global warming ran in May 2005.

Global. The Global Planners Declaration signed by APA and other national planning organizations at the World Planners Congress in June notes that urban activities generate 80 percent of all carbon dioxide emissions: www.globalplannersnetwork.org.

Cap and trade. Seven New England states have signed onto the Regional Greenhouse Gas Initiative, the first regional, mandatory carbon dioxide cap-and-trade program. The system limits total emissions and creates tradable "allowances" that permit users to emit a certain quantity of the capped gas. For details see www.rggi.org.