

MORNING KEYNOTE

John Carver Chair Distinguished Lecture

Sponsored by Otten, Johnson, Robinson, Neff + Ragonetti

Dr. Patrick Moore

Chairman and Chief Scientist of Greenspirit Strategies

9:00—9:45 a.m.

Thursday, March 9, 2006

Forum, Sturm College of Law

Dr. Patrick Moore has been a leader in the international environmental field for over 30 years. He is a co-founder of Greenpeace and served for nine years as President of Greenpeace Canada and seven years as a Director of Greenpeace International. As the leader of many campaigns Dr. Moore was a driving force shaping policy and direction while Greenpeace became the world's largest environmental activist organization.

In recent years, Dr. Moore has been focused on the promotion of sustainability and consensus building among competing concerns. He was a member of British Columbia government-appointed Round Table on the Environment and Economy from 1990 - 1994. In 1990, Dr. Moore founded and chaired the BC Carbon Project, a group that worked to develop a common understanding of climate change.

Dr. Moore served for four years as Vice President, Environment for Waterfurnace International, a manufacturer of geothermal heat pumps for residential heating and cooling with renewable earth energy. He is now a Director of NextEnergy Solutions, the largest distributor of geothermal systems in Canada.

As Chair of the Sustainable Forestry Committee of the Forest Alliance of BC from 1991 - 2002, he led the process of developing the "Principles of Sustainable Forestry" which were adopted by a majority of the industry.

In 2000, Dr. Moore published *Green Spirit – Trees are the Answer*, a photo-book that provides a new insight into how forests work and how they can play a powerful role in solving many of our current environmental problems.

Dr. Moore currently serves as Chair and Chief Scientist of Greenspirit Strategies, a consultancy focusing on environmental policy and communications in forestry, agriculture, fisheries and aquaculture, mining, biodiversity, energy and climate change.

SELECTED WRITINGS

BY AND ABOUT DR. PATRICK MOORE

WEDNESDAY, OCTOBER 19, 2005

Environmental Movement Has Lost Its Way

The Miami Herald

By Dr. Patrick Moore, PhD

I am often asked why I broke ranks with Greenpeace after fifteen years as a founder and full-time environmental activist. While I had my personal reasons—spending more time with a growing family rather than living out of a suitcase most of the year—it was on issues of policy that I found it necessary to move on.

Beginning in the mid-1980s, the environmental movement made a sharp turn to the political left and began adopting extreme agendas that abandoned science and logic in favor of emotion and sensationalism. I became aware of the emerging concept of sustainable development—the idea that environmental, social, and economic priorities could be balanced. I became a convert to the idea that win-win solutions could be found by bringing all interests together around the same table. I made the move from confrontation to consensus.

Since then, I have worked under the banner of Greenspirit to develop an environmental policy platform based on science, logic, and the recognition that more than six billion people need to survive and prosper, every day of the year. The environmental movement has lost its way, favoring political correctness over factual accuracy, stooping to scare tactics to garner support. Many campaigns now waged in the name of the environment would result in increased harm to both the environment and human welfare if they were to succeed.

So we're faced with environmental policies that ignore science and result in increased risk to human health and ecology. To borrow from the vernacular, how sick is that?

Genetic Enhancement:

Activists persist in their zero-tolerance campaign against genetically enhanced food, yet there is no evidence of harm to human health or the environment. Genetically enhanced (GE) crops reduce chemical pesticides, boost yield, and reduce soil erosion. Enriched with Vitamin A, Golden Rice could prevent blindness in 500,000 children every year in Asia and Africa if activists would stop blocking its introduction.

Salmon Farming:

The campaign against salmon farming, based on erroneous claims of environmental damage, scares us into avoiding one of the most nutritious, heart-friendly foods available. Salmon farming takes pressure off wild stocks, yet activists tell us to eat only wild fish. Is this how we save them, by eating more?

Nuclear Power:

Activists continue to lobby against nuclear energy, the only non-greenhouse gas-emitting power source that can replace fossil fuels and satisfy global demand. Renewable energies such as wind, geothermal and hydro are only part of the solution.

Vinyl:

So-called environmentalists want to ban the use of chlorine in all industrial processes. Yet the addition of chlorine to drinking water has been the greatest public health advance in history, and 75% of our medicines are based on chlorine chemistry. Activists call for a ban on polyvinyl chloride (PVC or vinyl), claiming it is the "poison plastic". There is not a shred of evidence that vinyl damages human health or the environment. Apart from lowering construction costs and delivering safe drinking water, vinyl's ease of maintenance and its ability to incorporate anti-microbial properties is critical to fighting germs in hospitals.

Hydro Electricity:

International activists boast they have blocked more than 200 hydroelectric dams in the developing world and are campaigning to tear down existing dams. Hydro is the largest source of renewable electricity, providing about 12% of global supply. Do activists prefer coal plants? Would they rather ignore the needs of billions of people?

Wind Power:

Activists argue wind turbines kill birds and ruin landscapes. A million times more birds are killed by cats, windows and cars than by all the windmills in the world. Wind turbines are works of art compared to some of our urban environments.

Forestry:

Trees are the most abundant, renewable and biodegradable resource in the world, yet activists tell us to reduce our use of wood. Forests are stable and growing where we use the most wood, and diminishing where we use less. Using wood sends a signal to the marketplace to plant more trees and produce more wood. There is about the same forest area in North America as there was 100 years ago.

The Prognosis:

Activists' zero-tolerance, fear-mongering campaigns would ultimately prevent a cure for Vitamin A deficiency blindness, deplete wild salmon stocks, decrease the safety of health care, deprive developing nations of clean electricity, stop renewable wind energy, block a solution to global warming, and contribute to deforestation. How sick is that?

America Warms to Nuclear Power



February 6, 2006
by David R. Francis

The cure for the United States' "addiction" to oil is more nuclear power. That's becoming a more popular view. Even a few environmental groups see nuclear power as a necessity to maintain America's lifestyle.

A public opinion survey late last year sponsored by the International Atomic Energy Agency in Paris found that, in America, 40 percent of the people see nuclear power as safe and support new plants; 29 percent say existing plants are OK, but oppose building new ones; and 20 percent say the plants are dangerous and want all of them closed.

Curiously, the survey of 18 nations, rich and poor, found that nuclear power is seen more favorably in the US than it is in any other country surveyed except South Korea. Yet US utilities have not ordered a new atomic plant since 1978.

Even in France, highly dependent on nuclear power, only 25 percent support more plants, and 50 percent say enough is enough - don't build more.

Regardless of opinion, nuclear power is reviving around the world. Eight new nuclear plants came on line last year. One in Ontario, Canada, was restarted after a long shutdown. Globally, 443 "nukes" are in operation today.

Last week, President Bush proposed an "Advanced Energy Initiative" that involves investing more "in zero- emission coal-fired plants; revolutionary solar and wind technologies; and clean, safe nuclear energy."

To Patrick Moore, who cofounded Greenpeace, nuclear power is the only realistic solution to future power needs.

"You can't solve this problem with windmills and photo panels alone," says the chairman of Greenspirit Strategies Ltd., a Vancouver, B.C., environmental

consulting firm. These two power sources tend to be expensive. More important, they are "intermittent." They work only when the wind blows or the sun shines. Economies need "baseload" power that operates all the time.

Coal can provide an around-the-clock power stream. But the 1,300 coal-fired plants in the US already belch out 10 percent of the world's greenhouse gases. Do we want more climate-changing gas?

With encouragement and subsidies from the Bush administration and Congress, US utilities are further along with new nuclear plants than most Americans probably realize. Frank Bowman, president of the Nuclear Energy Institute in Washington, D.C., recently noted that nine companies, consortiums, or joint ventures have firm plans for at least 12, and perhaps as many as 20, new plants.

The first application for a combined construction and operating license - a new procedure the industry hopes will avoid delays - should be submitted to the Nuclear Regulatory Commission next year and win approval by 2010 or so, Mr. Bowman reckons. Assuming construction takes four years, the plant could come on line by 2014.

By 2025, 30,000 megawatts of new nuclear capacity will be operating in the US, with more plants on the way, Bowman guesses. That might displace 30 to 50 coal plants.

Other nations are seeing a need for additional nuclear power. Last November, British Prime Minister Tony Blair talked of taking a "serious look" at new nuclear reactors. Ontario recently decided to restart two mothballed units at the Bruce nuclear power facility - in addition to the Pickering plant put back into operation last year. Pakistan wants to buy six to eight 600-megawatt nuclear-power reactors from China in the next decade. Germany had planned to shutter all its nuclear power sites by 2020. But the recent fuss over Russian natural gas supplies to Ukraine makes that less likely. China plans to add 27 new plants to its existing nine by 2020. And so on.

Is this risky? Yes, but all power sources have problems. Coal mining is dangerous. Dams can clobber the environment. Natural gas is explosive. Oil is costly. All fossil fuels emit greenhouse gases. Windmills are noisy and can kill birds.

To Dr. Moore, the dangers associated with nuclear power are exaggerated.

Fewer than 60 people have been killed by nuclear power accidents worldwide, none in the US. An international team of 100-plus scientists, reviewing the worst nuclear power-plant accident (Chernobyl, Ukraine, in 1986), estimated last September that up to 4,000 people may eventually die from radiation exposure. That compares with earlier predictions of 300,000.

Terrorists might succeed in crashing an airplane into a nuclear plant. But a

modern containment structure is unlikely to be penetrated. It consists of six feet of reinforced concrete, with one-inch steel plates on both sides. Even if such a suicide mission succeeded in penetrating the dome, the plant would not explode. Radiation might be spread, but most of it would weaken rapidly and is less dangerous than many think, says Moore.

More at risk in an aircraft attack is a liquefied natural-gas plant. It could create "one massive fireball," he warns.

Moore supports energy conservation, energy efficiency, and alternative energy sources. But to him, the "mathematics" indicate that nuclear power is essential to the future provision of adequate electricity.

Nuclear proliferation is a separate issue. It requires "real" attention, he says.

Rocky Mountain News

February 4, 2006

Newmont responsible on environment, Greenpeace co-founder says.

As I sit with Emanuel in the backyard of his new house in Ntotoroso, Ghana, surrounded by his wife, children, in-laws and mother, the enterprising dad explains through an interpreter how his family hasn't looked back since coming to the new settlement.

He operates a home-based business, has managed to purchase some nearby farmland, and volunteers as chairman of the water sanitation committee, overseeing the process that ensures safe drinking water for his family and neighbors. In short, Emanuel and his family are feeling optimistic.

As a life-long environmentalist, a co-founder of Greenpeace and for almost two decades a critic of the fear-mongering tactics of that organization and others like it, I am astonished by the recent spate of reports in prominent media, critical of U.S. mining companies such as Denver-based Newmont Mining and its operations in Ghana and Peru.

I've seen first-hand the developments in infrastructure and skills that companies committed to sustainability like Newmont can bring about. It's for that reason my organization has partnered with Newmont, and that's how I know such one-sided reports are particularly off the mark.

So-called investigative journalism is increasingly full of factual errors and innuendo and often fails to report the company's successes along the way to its becoming a leader in sustainability and a catalyst for change in developing countries. As a result, responsible companies such as Newmont are vilified. In the end, it is the local villagers who stand to lose the most - a decent living wage.

New housing at Ahafo and Ntotoroso in Ghana is the result of Newmont's enormous contribution of resources and progressive thinking to the resettlement project. Resettlement principles, policies, procedures and rates were determined through a collaborative multistakeholder process. The company consulted with district and regional town and country planners and designed 37 resettlement house types to meet the community's needs. Owners were able to customize their new homes.

Collaboration is centered around the Resettlement Negotiation Committee, a group that includes representatives of community members, traditional authorities, district and regional governments, nongovernmental organizations and the company.

Homes provided in new settlements are far superior to the structures they replaced. If reporters actually visited these regions, they would know this, and if they had any concern for the villagers, they would report the truth rather than make a mockery of it.

Cyanide has also fallen victim to media misrepresentation. There hasn't been a single mention of steps taken by companies to manage cyanide, and short shrift is given to the International Cyanide Management Code, organized under the auspices of the United Nations Environment Program and the International Council on Metals and the Environment. The code focuses on the safe management of cyanide at every stage: transportation procedures; on-site storage and use in the recovery of gold; decommissioning of cyanide facilities; accident prevention; worker health and safety; emergency response and training; community dialogue; public reporting; and stakeholder involvement.

Companies that adopt the code must have their mining operations audited by an independent third party. This measure has resulted in real change across the industry. No mention has been made of the fact that all modern cyanide leach operations are based on re-circulation systems with double heavy-gauge plastic liners and leak detection. Anti-mining articles seem to imply that cyanide is being

spewed into the environment when this is not the case.

Nevertheless, readers should know that cyanide is present in the environment and naturally available in many plant species. Cyanide toxicity is not widespread due to its low persistence in the environment. Cyanide breaks down in sunlight and is not accumulated or stored in any mammal studied. There is no reported bioaccumulation of cyanide in the food chain - that is, it hasn't been shown that cyanide is passed up the food chain from one organism to the next.

World leaders in mining are constantly refining environmental safeguards and enhancing social programs. I challenge any reporter to visit Newmont's relocation settlements in Ghana and Peru. Hard-working men such as Emanuel - and his extended family - are living proof that Newmont operates with integrity and respect.

Since my entry into the global environmental movement in 1971 - and especially in the last decade - mining has contributed significantly to a more sustainable world economy, and key beneficiaries of this progress are mining workers, families and communities. How unfortunate the media is missing such an important part of the sustainability discussion.

Going for gold

Newmont's Ahafo gold mine in Ghana is scheduled to deliver its first gold production in the second half of 2006.

- Investment: (estimated) \$410 million to \$435 million
- Employment: 600
- Operating costs: (estimated) \$200 to \$220 per ounce
- Gold reserves: (estimated) 10.6 million ounces

Environmentalism for the 21st Century

*--a selection--the full article is available at
<http://www.greenspirit.com/index.cfm>*

It's easy to see that the mainstream of the environmental movement has fallen prey to misguided priorities, misinformation, dogmatism, and self-interest. Soon after I left Greenpeace in 1986, I found out that they had initiated a pension plan. I knew I had got out just in time. In the early days many of us realized that our job was to work ourselves out of the job, not to give ourselves jobs for life. I feel the same way about my efforts to promote sustainability, sustainable forestry, and the application of science and logic to environmental issues. I am sometimes amazed by the fact that this seems more difficult than my original work to promote awareness of ecology and the environment. Perhaps this time I do have a job for life. Still no pension plan, however!

What are the main features of a rational environmental policy for the 21st century? Some points to consider are as follows:

Wherever possible, we should move towards an economy that is based on renewable energy and material resources. Sustainability is not synonymous with renewability but it is strongly linked to it. Where we do use non-renewable resources they should be used wisely and recycled whenever practical. We should learn to manage our population voluntarily. The UN Conference on Population, held in Cairo in 1994, concluded that the most effective way to manage population growth is the education and empowerment of women. This leaves no place for patriarchy, religious fundamentalism, or dictatorships. We should develop a more globally unified analysis of the relationships among land use, energy and resource consumption, forests and biodiversity, and population. Policies that have global implications must not be logically inconsistent one with the other.

We should learn to be better gardeners at both local and global scales. With 6 or 8 billion mouths to feed this will require more intensive agricultural production

including the use of fertilizer, synthetic pesticides, and biotechnology. It is a simple fact of arithmetic that the less land we need to grow our food the more is available for forest and wilderness.

Urban sprawl must be brought under control. We have allowed the automobile to determine urban form by default. 300,000 hectares of forest are lost in the United States every year, all of it due to 200 cities spreading out over the land. Denser, more livable, cities must be designed if population continues to grow.

Deforestation in the tropics must eventually be stabilized or reversed. This can be accomplished by the transfer of intensive agricultural practices, the establishment of fast-growing, sustainable fuel-wood plantations, and the management of population growth.

As an ecologist and environmentalist, not a political scientist or political activist, I have always shied away from strong opinions on poverty and class. But it seems unacceptable to me that so many hundreds of millions of people live at a material standard that we in the industrialized countries would not consider acceptable for a dignified life. I believe there is a great deal to be learned by exploring the relationships between ecology and politics. In some ways politics is the ecology of the human species. The two subjects have developed such completely different disciplines and terminologies that it is hard to think of them together. But I believe we must if we are to gain a truly holistic understanding of the relationship between ourselves and our society, and the Earth on which we ultimately depend.

MAY THE FOREST BE WITH YOU

Co-founder of Greenpeace, Dr. Patrick Moore is Chairman and Chief Scientist of Greenspirit Strategies Ltd. in Vancouver, Canada.

www.greenspiritstrategies.com