

**2007 BLUE PLANET PRIZE:  
ANNOUNCEMENT OF PRIZE WINNERS**

**Professor Joseph L. Sax (U.S.A.)**

For drafting the world's first modern environmental law based on public trust doctrine supporting citizen action for protection of the environment, and for his pioneering contributions in development of the theory of environmental protection law and in establishing environmental laws internationally

**Dr. Amory B. Lovins (U.S.A.)**

For his contributions to leading global energy strategy for protection of the global environment by efficient utilization of energy through his advocacy of the concept of the "soft energy path" and invention of the Hypercar.

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This year marks the 16th awarding of the Blue Planet Prize, the international environmental award sponsored by the Asahi Glass Foundation, chaired by Hiromichi Seya. Two Blue Planet Prizes are awarded to individuals or organizations each year that make outstanding achievements in scientific research and its application, and in so doing help to solve global environmental problems. The Board of Directors and Councillors selected the following recipients for this year.

**1. Professor Joseph L. Sax (U.S.A.)**

**Professor Emeritus, University of California, Berkeley**

Professor Sax has been and still is the leading environmental law scholar in the United States and the world, and is a pioneer of various environmental laws in the U.S. such as the law on water rights, the development of citizens-right litigation strategies, and environmental impact assessment laws. In particular, he is famous for the Michigan Environment Protection Act, popularly known as the "Sax Act," the world's first modern environmental law drafted on the basis of public trust doctrine. And not only in the United States, but also internationally, he has supported many governments and multi-national organizations such as the United Nations, has been influential in the development of theory on environmental protection for international law and has articulated many ideas on issues in international environmental law. Recently, he is serving important roles and making active contributions not only to protection of the environment but also of cultural properties, arguing the need for implementation of public trust doctrine in protection of cultural treasures and historical and archaeological resources.

**2. Dr. Amory B. Lovins (U.S.A.)**

**Chairman and Chief Scientist, Rocky Mountain Institute**

For the last 40 years and through work in more than 50 countries, Dr. Lovins has contributed to the efficient use of energy and the transition to renewable energy sources in order to protect the global environment. Since the 1970s, when he first advocated the concept of the "soft energy path" that forms the basis of these objectives, he has consistently advocated and implemented pioneering ideas in energy and other fields. Among his achievements is the invention of the ultralight, ultra-energy-efficient Hypercar devised for significant reduction of the burden on the natural environment and the design of buildings with little or no net use of energy. In co-authored works *Factor Four: Doubling Wealth—Halving Resource Use* (1997) and *Natural Capitalism: Creating the Next Industrial Revolution* (1999) showed how to double wealth and halve resource use by quadrupling resource productivity (production of goods and services per unit of resource input), and the importance of natural resources and the ecosystem. The broad reach of his activities shows the way towards resolving today's intricately intertwined issues of energy, environment, resources, development, and security.

Both recipients will be awarded a certificate of merit, a commemorative trophy and a supplementary award of 50 million yen.

The awards ceremony will be held on October 17, 2007 (Wednesday), at the Tokyo Kaikan (Chiyoda Ward, Tokyo). The commemorative lectures by the prize recipients will be held at the United Nations University (Shibuya Ward, Tokyo) the next day, on October 18 (Thursday).

\*This press release may also be viewed on the Internet from June 21, 2007 at [www.af-info.or.jp](http://www.af-info.or.jp).

## Report on the Selection Process (16th Annual Prize, 2007)

A total of 1,050 nominators from Japan and 1,350 nominators from other countries recommended 121 candidates. The fields represented by the candidates, in order of number, were ecology (40), environmental economics and policy making (23) and atmospheric and earth sciences (20).

The candidates represented 29 countries; 15 persons, 12 percent of the total, were from developing countries.

After individual evaluation of the 121 candidates by each Selection Committee member, the committee was convened to narrow down the field. The results of their deliberation were examined by the Presentation Committee, which forwarded its recommendations to the Board of Directors and Councilors. The Board formally resolved to award the Prize to **Professor Joseph L. Sax**, and **Dr. Amory B. Lovins**.

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## Profile of the 2007 Blue Planet Prize Recipient

### Professor Joseph L. Sax (U.S.A.)

Professor Sax has shown with pioneering views the basis of how environmental preservation could be promoted theoretically from the point of law. He is a pioneer of various environmental laws in the U.S. such as the law on water rights, the development of citizens-right litigation strategies, and environmental impact assessment laws, and the Michigan Environment Protection Act which is known as the "Sax Act" the world's first modern environmental law drafted on the basis of public trust doctrine. He has been giving continuing advice and assistance for major environmental groups in the U.S. that are trying to improve the implementation and enforcement of national or international environmental laws. He also has been active and contributed in helping governments, and multilateral organizations (such as the U.N. agencies) improve the role of environmental law in contending with continuing ecological degradation, pollution, and diminishing water and natural resources stocks.

Professor Sax was born in Illinois, U.S.A. in 1936, graduated from Harvard University in 1957, and earned the degree of Juris Doctor from the University of Chicago in 1959. Then, after working as an attorney in the U.S. Department of Justice in Washington, D.C., he began to teach law at the University of Colorado in 1962. In 1966, he moved to the University of Michigan, where he became the Philip A. Hart Distinguished University Professor. He joined the Boalt faculty of the University of California at Berkeley in 1986, and at present is the House & Hurd Professor of Environmental Regulation, Emeritus.

Sax began his work on environmental protection in the mid-1960s, when environmental law as a legal category did not exist. Series of lawsuits were raised against pesticide spraying encouraged by Rachel Carson's "*Silent Spring*" and he participated in a trial where he sought an injunction against the spraying of Dieldrin in Michigan and elsewhere. Although all lawsuits were wholly unsuccessful, he was drawn to the area and further engaged himself in the field of environmental law through them when he observed that courts rejected efforts by concerned citizens to protect natural resources on the ground that they had no legal status, such as ownership of property or rights under a contract. At the same time he observed that the laws themselves rarely contained environmental protections.

In 1969, Sax learned of a lawsuit opposing the construction of an apartment building along the bank of the Potomac River in Washington D.C. The basis for the suit was the public trust doctrine, and here he found the legal basis to advance environmental conservation causes. The public trust doctrine limits private use of certain public natural resource, and in Sax's view, private property in such resources is fundamentally restricted, and it presupposes that an individual does not have a right which is contrary to public interest. This is central to Sax's conception of environmental law.

Michigan Environment Protection Act which was adopted in 1970 by the Michigan Legislature as the "Sax Act" was drafted by Professor Sax in the 1960s. It was groundbreaking in that it authorized environmental citizen suits and ensured standing in environmental litigation. In it, it states "any person, partnership, corporation, association, organization or other legal entity may maintain an action in the circuit court for the protection of the air, water and other natural resources and the public trust therein from pollution, impairment or destruction." A primary

feature of the law was its recognition that every person is legally entitled to the benefits of legal protection against pollution and other environmentally destructive activities, and that the courts were to be empowered to grant relief against such activities. These provisions became the model for equivalent citizen suit provisions in federal environmental laws and set in motion the authorization of “private attorneys general” to advance environmental values in courts of law.

The Act was called an “April Fool’s Day Joke” with the submission date being April 1, and the fact also enables us to recognize how significant an impact it had then. The “Sax Act” later became the model for similar statutes in more than a dozen other states.

In 1970, Sax published “*The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention.*” This landmark article argued that the U.S. courts has the authority and responsibility to prevent legislatures and administrative agencies from damaging, selling, or giving away environmental features, such as coastlines and wetlands, that were entrusted to the ownership of the people as a whole. More than any other work in the history of environmental law, this article has been cited countless times as the leading discussion of the public trust principle, and it has initiated an entire literature on the limits of governments in America to damage environmental resources held in trust for all people.

Sax served as Deputy Assistant Secretary of the U.S. Interior Department and as legal counsel to the Secretary, Bruce Babbitt between 1994 and 1996, and after he returned to academia, he continued to give advice on environmental issues to the Clinton Administration. Moreover, he has served as a consultant to various U.S. federal and state organizations, and to the governments of a number of other nations including Japan.

Sax attended an international symposium held in Tokyo in 1970 to discuss pollution problems and initiated the concept of “Environmental Right”, which became the conclusion of the symposium and proposed to the world.

Sax is author of five books on environmental law issues, the co-author of nine other books, and the author of about 150 law review articles. He has also published many magazine articles, newspaper essays, and reports emphasizing the need for improving environmental protection in the U.S. and the world. He did more than write. He led the creation of the Environmental Law Institute, and the launch of the Environmental Law Reporter. Many academics and professionals were inspired by Sax’s innovative scholarship in multiple contexts addressing numerous critical environmental issues. To the extent much of international environmental law followed patterns established by American law, Professor Sax has also been influential in the development of international legal principle and has shown many ideas toward various issues international environmental law targets.

In seeking to explain the appropriate limits of private property, and the legitimate interests of the public, Sax has in recent years sought to draw provocative analogies between the need to protect the natural world’s treasures, and the well-accepted understanding of the need to protect cultural treasures, such as great works of art and historical and archaeological resources. He has therefore written about “cultural property” as another example of the need for a public trust concept, and to illustrate the importance of appreciating the limits of what can be claimed in the name of private property.

Professor Sax has been and still is the leading environmental law scholar in the United States and the world, and he has repeatedly created new legal innovations to expand the realms of environmental and natural resources protection laws, and has directly or indirectly influenced the ideas of scholars in many other countries. He has also been actively involved in public affairs as they relate to environmental protection and conservation issues, and contributed to the world.

### **Biographical Summary**

1936	Born in Illinois
1957	A.B., Harvard University
1959	J.D. University of Chicago
1962-66	Professor of Law, University of Colorado
1966-86	Philip A. Hart Distinguished University Professor, University of Michigan
1986-	James H. House & Hiram H. Hurd Professor (emeritus), School of Law (Boalt Hall), University of California (Berkeley)
1994-96	Counselor to the Secretary of the Interior, Deputy Assistant Secretary of the Interior

### **Awards**

1976	Environmental Quality Award, U.S. E.P.A
1977	Elizabeth Haub Award, Free Univ. Brussels
1984	Wm. O. Douglas Legal Achievement Award, The Sierra Club
1985	Environmental Law Institute Award
2004	Distinguished Water Attorney Award

### **Dr. Amory B. Lovins (U.S.A.)**

From the early 1970s, Dr. Lovins has greatly contributed to the world by making policy proposals and developing technologies based on his original theory on energy, with consideration to protection of the natural environment. He has advocated a concept called the “soft energy path” with dispersed energy system at the core, integrating far more efficient use of energy with a transition to appropriate renewable sources. He has invented the Hypercar<sup>®</sup>, which is ultralight and ultra-energy-efficient, enabling a significant reduction in the burden on the natural environment. He has also shown how to design buildings that use little or no net energy at comparable or lower cost. Moreover, he has proposed a roadmap for profitably ending global oil dependence. Showing the way forward by explaining his innovative concepts, he has demonstrated technically feasible practices and realistic policies, thus gaining high acclaim.

Dr. Lovins was born in Washington, DC in 1947. From his high-school days, he showed talent in physics, music, classics, and mathematics. He entered Harvard College in 1964. After two years of study, he transferred in 1967 to Magdalen College, Oxford, England. He became a Junior Research Fellow of Merton College, Oxford, in 1969, receiving a master of arts (M.A.) degree in 1971.

During his 14 years in the U.K., Dr. Lovins was fascinated by Snowdonia National Park in North Wales, and in 1971, was asked by David R. Brower (1998 BP Prize winner), who was then the chairman of Friends of the Earth, to write a book about these endangered Welsh wildlands. Dr. Lovins then served for ten years as British Representative for Friends of the Earth. While taking interest in nature and

environment, he became involved increasingly in energy strategy, initially through his research on climate. He wrote his first books on energy "*World Energy Strategies*" in 1974.

The energy crisis in 1973 drew more people to Dr. Lovins's ideas, and in 1976, he published a groundbreaking essay "Energy Strategy: The Road Not Taken?" in *Foreign Affairs*. It redefined the energy problem from "how to supply more energy" to how to provide just the amount, type, and scale of energy that would do each task in the cheapest way, and there he put forward the concept of the "soft energy path." The concept points out to a new system with efficient use of energy and the use of "soft energy technologies" based on such resources as solar, wind force, bio-fuel and geothermal heat. This is opposite to the "hard energy path" which points out to an existing huge centralized power generation system utilizing fossil fuel and nuclear power. He envisaged this approach as a "master key" to unlock the intertwined puzzles of energy, environment, resources, development, and security. Dr. Lovins suggested that soft energy paths are possible, profitable, environmentally benign, and supportive of fair global development without the hard path's prohibitive costs and risks.

The soft-path concept initially attracted huge criticism from traditional energy suppliers. The power generation trade association devoted an entire issue of its trade journal to attacking the *Foreign Affairs* essay. Some critics dismissed Dr. Lovins as a social idealist; others attacked the economic or technical feasibility of his ideas, charging that he slants his analyses. But even his critics conceded that he was something of a genius. Nowadays, efficient use and soft energy technologies are being adopted worldwide through competition in the marketplace, and it can be said that his pioneering views have been proven.

Dr. Lovins continued earnestly to write books (six by 1978) and technical papers elaborating his analyses of energy and security alternatives. He also consulted widely to industry, and was active in energy affairs in some 15 countries (later 50) as a policy advisor. He and his first wife L. Hunter Sheldon co-founded Rocky Mountain Institute in 1982 to foster the efficient and restorative use of resources. In 1982–84 they built their home and the original headquarters of Rocky Mountain Institute, still one of the world's most efficient buildings. It uses roughly 1% the space- and water-heating energy, 10% the household electricity, and half the water of a normal house, and its passive-solar interior "jungle" has produced 28 banana crops with no central heating system in outdoor temperatures as low as  $-44^{\circ}\text{C}$ . The essence of its construction is that in order to thoroughly utilize the solar heat, it uses high performance insulation and glass, and takes notice on the heat intake and prevention of its dissipation. Yet through integrative design—optimizing the whole building as a system for multiple benefits, rather than isolated components for single benefits—its extra construction cost was only  $\$16/\text{m}^2$ , repaid from energy savings in ten months with 1984 technologies (today's are much better).

Radical energy efficiency has always been a key goal at Rocky Mountain Institute, examining in great detail nearly every use and emphasizing the most important ones. In 1991, Dr. Lovins invented the Hypercar<sup>®</sup>, recognizing the synergistic benefits of closely integrating two known and demonstrated techniques—ultralight, ultra-aerodynamic construction and hybrid-electric drive (invented in 1900)—in a radically simplified, software-rich vehicle design. From 1991 to 1993, he reviewed and developed the concept in depth with major automakers and other experts. In 1993, he publicly released the "Hypercar" concept, which received the Nissan Prize. Compared to then-existing cars, Hypercar-class vehicles could triple fuel economy with equal or better performance, safety, and affordability. The hybrid-electric powertrain will initially be powered by an internal combustion engine, but the design favors a fuel cell using compressed hydrogen gas, redoubling the vehicles' fuel economy.

In 1997, the Lovinses and Prof. E.U. von Weizsaecker wrote *Factor Four: Doubling Wealth—Halving Resource Use*, whose 50 examples show how to double wealth and halve resource use by quadrupling resource productivity (production of goods and service per unit of resource input). And in 1999, with Paul Hawken, the Lovinses published the book *Natural Capitalism: Creating the Next Industrial Revolution*, and described the importance of "natural capital" which has immense economic value, which also is the total sum of natural resource and ecosystem bearing such functions as air and water

purification, climate stabilization, detoxification of waste, and are indispensable to the society and all living things.

In 2004, Dr. Lovins published his 29<sup>th</sup> book, *Winning the Oil Endgame*. It provides a detailed roadmap for eliminating U.S. oil use by the 2040s, led by business for profit. He proposed that combining innovative technologies with new competitive strategies and innovative public policies would accelerate a transition to a new order and would enable an end to oil dependence.

Dr. Lovins with his remarkable foresight has patiently and consistently proposed and implemented pioneering concepts since the 1970s in the energy field and many others. Inefficient energy use has created many economic and security issues and most of the world's environmental problems, so he has designed compelling technological, business, and policy innovations to solve them. At the same time, he has shown how to achieve a society where high energy efficiency and sustainable energy supplies can lead to a safer, environmentally healthier, climate-stabilized, and more rewarding future.

### **Biographical Summary**

1947	Born in Washington DC
1964-67	Harvard University
1967-69	Magdalen College, Oxford, England
1969-71	Junior Research Fellow, Merton College, Oxford, England Received a master of arts (M.A.) degree 1971
1982	Co-founded Rocky Mountain Institute; currently Chairman & Chief Scientist
1999	Established Hypercar, Inc. (Chairman 1999-2007), now Fiberforge, Inc.
1968-	Consulted for governments and the industries in the U.S. and worldwide

### **Awards**

1982	Mitchell Prize
1983	Right Livelihood Award
1989	Delphi Prize
1993	Nissan Prize, ISATA; MacArthur Fellow
1997	Heinz Award for the Environment
1998	Lindbergh Award
1999	World Technology Award
2000	<i>Time</i> Heroes for the Planet Award
2001	Shingo Prize
2005	Jean Meyer Award
2006	Benjamin Franklin Medal and Life Fellow, Royal Society of Arts (London)
2007	Honorary Member, American Institute of Architects

## Remarks from the Award Recipients upon Notification of their Selection

### Professor Joseph L. Sax

I am deeply honored to have been awarded the Blue Planet Prize presented by the Asahi Glass Foundation. The Prize, in recognition that environmental conservation is among the most urgent global issues, provides encouragement to all those who work seeking resolution of environmental problems. It is particularly gratifying for me that the Foundation, which through the Prize, recognizes achievements in scientific research, has on this occasion chosen to acknowledge the role that the rule of law plays in implementation of scientific achievement in the governance of our societies, and in assuring justice to those who have suffered environmental harm.

The receipt of this distinguished prize gives me the opportunity to return again to Japan, where I have on three previous occasions come to work on environmental issues with Japanese colleagues who did pioneering work in the field of environmental law at a time when it was dismissed by many as a passing fad. In that regard, I would like to take this occasion to pay tribute to the late Professor Shigeto Tsuru, who for many years inspired and encouraged my work.

### Dr. Amory B. Lovins

Most environmental problems, and many development and security challenges, are caused by the overuse and misuse of energy. Energy is a master key to unlock these intertwined puzzles, and teaches new thinking that can solve other problems like water.

In 1976 I realized the energy problem wasn't just finding where to get more energy, of any kind, from any source, at any price. Nobody wanted raw kilowatt-hours or barrels of black goo, but rather *services* like hot baths and cold beer, mobility and visibility, comfort and cooked food. So how much energy, of what quality and scale, from what sources, could do each task in the cheapest way?

This new question led to better answers. Today virtually any country, even already-efficient Japan, can wring several times more work from its energy and need only renewable sources. Since these shifts make sense *and* make money, business can lead them for profit, thereby solving many other problems too.

I have had the privilege of making this energy transition my lifeswork, collaborating with treasured colleagues around the world. This honorable prize recognizes and encourages all who share this mission, so crucial to the survival of our blue planet.

## **Message to the Japanese public**

### **Professor Joseph L. Sax**

I am greatly honored to receive the Asahi Glass Foundation's Blue Planet Prize, which seeks to encourage research into understanding and protecting our natural environment.

Acknowledgment of the importance of work designed to reduce adverse human impacts on the planet is today more timely and urgent than ever. It is especially gratifying for me that the vital role of the law in implementing scientific achievement is being recognized this year. I am also delighted to return to Tokyo, where, nearly forty years ago, I attended one of the first international meetings ever devoted to environmental protection.

### **Dr. Amory B. Lovins**

Japan's flag bears the sun. Traditional Japanese buildings blend into nature. Japan judges technology not just on functionality but on harmonious [*kansei*] user experience. Japan leads the world in efficient cars, industrial processes, and solar cells. Japanese industrial genius invented the most powerful tools for eliminating waste. And once Japanese society forms a new consensus, it can cheerfully change course with no regrets—and move faster than anyone.

Japan can therefore lead the global transition to efficient energy use and renewable energy sources. These can meet all Japan's needs cost-effectively, because Japan, though poor in fossil fuel, is rich in renewable energy, human energy, ingenuity, and traditional wisdom. Thus it is especially fitting, and humbling, that my efforts should be recognized in Japan, from whose extraordinary culture I have learned so much.