Science and Technology for Sustainability

P3: Benefiting people. Promoting prosperity. Protecting the planet.

EPA United States Environmental Protection Agency

Office of Research and Development

"Through the power of collaborative networks and partnerships, federal agencies, state governments, and the industrial and scientific communities can come together to achieve the goal of sustainability for people, prosperity and the planet."

Mike Leavitt, Administrator
United States Environmental Protection Agency

Collaborate

EPA is expanding its extensive sustainability efforts to encompass research; the integration of social, economic and environmental policies; environmental futures; and measuring progress toward sustainability goals. To enhance this effort, EPA has developed a web site that provides easy access to EPA's sustainability information. To learn more about EPA's sustainability initiatives, visit www.epa.gov/sustainability.

What Is Sustainability?

Sustainability has many definitions, but the basic principles and concepts remain constant: balancing economic growth, protecting the environment and fostering social responsibility that leads to an improved quality of life for ourselves and future generations. In 1987, *Our Common Future* characterized sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This concept encompasses ideas, aspirations and values to inspire public and private organizations and individuals to become stewards for the environment and promote positive economic growth and social objectives.

Achieving Environmental Protection and Economic Growth

Over the next 50 years, projections suggest that the world's population could increase by 50 percent. Global economic activity is expected to increase by 500 percent. Concurrently, global energy consumption and manufacturing activity are likely to rise to three times current levels. These trends could have serious social, economic and environmental consequences unless we can find a way to use fewer resources in a more efficient way. The task ahead is to help shape a sustainable future in a cost-effective manner, recognizing that economic and

environmental considerations, supported by innovative science and technology, can work together and promote societal benefits.

Connecting the Dots

EPA has dozens of programs, policy tools and incentives that can be used to encourage and practice sustainability. We are working to find ways to blend these programs to help improve industrial practices and assist states and local governments to manage their resources effectively.

Research. EPA is working to develop knowledge and decision tools that provide, enable and stimulate long-term environmental solutions. For more than a decade, EPA's research office has been conducting and funding research on sustainability in areas such as green chemistry and engineering, global change, economics and decision sciences, watershed management, industrial ecology, environmental justice, ecological forecasting and emerging technologies.

Environmental Technology Council. EPA established this group to coordinate and focus our technology programs. The Council will facilitate innovative technological solutions to environmental problems and challenges.

P3 Award. To encourage the integration of sustainability into higher education and training, EPA launched this national student design competition in partnership with other public and private organizations. The competition provides grants to teams of university students to research, develop and design solutions to environmental challenges to sustainability. P3 highlights the three pillars of sustainability – People, Prosperity and Planet – as the next step beyond pollution prevention. Visit www.epa.gov/p3/ for more information.

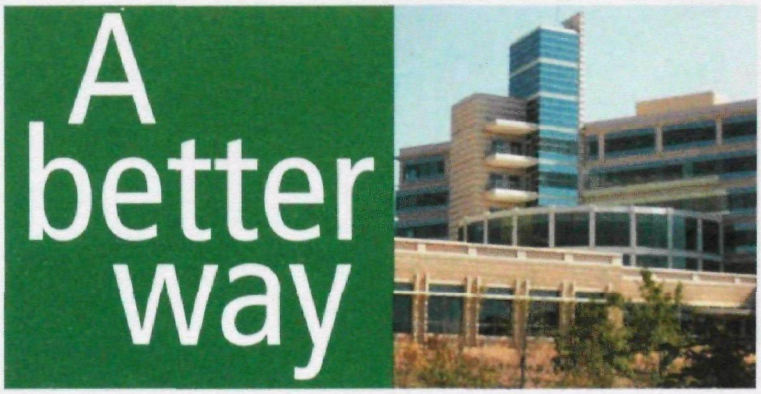
Green Practices. EPA is working to reduce its own ecological footprint by purchasing and using environmentally preferable products, decreasing the quantity of material entering its waste stream and promoting recycling. EPA is also following the U.S. Green Building Council's LEED green building rating system in all its major construction projects and striving for maximum possible use of green power at its facilities.

Collaborative Networking

To encourage and strengthen the many existing regional, state and local efforts on sustainable development, EPA is funding collaborative projects that focus on concrete local and regional problems and solutions. These projects transcend traditional regulatory approaches to air, water and land and take a long-term view while measuring short-term progress. Project areas focus on watershed management, stream restoration and industrial practices. Project partners include state and local governments, the private sector, nonprofit organizations and the public.

"Pursuing the goal of sustainability allows us to use innovative science and technology to achieve the goals of environmental and economic prosperity for both current and future generations."

Dr. Paul Gilman, Science Advisor
United States Environmental Protection Agency



Finding a Better Way

In a world of rapidly increasing complexity, conventional approaches may no longer be adequate to ensure the viability of the Earth's ecosystems and protect human health. EPA's Science Advisory Board has urged EPA to think ahead and plan for the future. EPA is striving to find a better way to promote prosperity, benefit people and protect the planet through sustainability.

Visit www.epa.gov/sustainability for more information.

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