The Wirth Chair in Environmental and Community Development Policy
UNIVERSITY OF COLORADO AT DENVER & HEALTH SCIENCES CENTER
The Graduate School of Public Affairs

Our Environmental Future: Challenges and Opportunities

By Douglas M. Costle

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University of Colorado at Denver & Health Sciences Center
Campus Box 133 | P.O. Box 173364
Denver, CO 80217

TIM WIRTH CHAIR IN ENVIRONMENTAL AND COMMUNITY DEVELOPMENT POLICY

Occasional Papers and Speeches

Douglas M. Costle
William D. Ruckelshaus

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Institute for Policy Research and Implementation
Graduate School of Public Affairs
University of Colorado at Denver

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1445 Market Street, Suite 320
Denver, Colorado 80202-1727
Phone: (303) 820-5602
Fax: (303) 534-8774

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Dear Colleague:

I am pleased to provide you with a copy of two presentations made last spring by two outstanding leaders of EPA, William Ruckelshaus and Douglas Costle. Both Mr. Ruckelshaus and Mr. Costle were the first Senior Tim Wirth Chair Fellows. Their willingness to join us as Wirth Chair Fellows illustrates the importance of the Tim Wirth Chair in Environmental and Community Development Policy. The Chair was created to provide national and statewide leadership concerning efforts to define and carry out sustainable development policies and strategies. It honors former Senator, now Undersecretary of State Timothy Wirth, for his years of environmental leadership and accomplishment.

Mr. Ruckelshaus and Mr. Costle provided direction to EPA during critical periods in the Agency's history. Both are credited with administering EPA in a fair, innovative and efficient manner. Both are perceived as individuals who were capable of converting vision to reality. The environment is better for their efforts and their tenure at EPA. Their comments in the papers about EPA's future and the future of environmental initiatives are thought provoking and incisive.

We welcome your comments on the papers. We also welcome your continued interest in the Tim Wirth Chair. This year the Chair will initiate a series of vital initiatives re. sustainability. They include: a Senior Fellows Program; a Media Awards Program; a Community Awards Program; the first Annual Conference on the President's Council on Sustainable Development; the first Annual Conference on the State of Colorado's Sustainable Development Progress; a technical assistance program for counties and cities interested in developing sustainable development programs.

Sincerely,

Marshall Kaplan, Executive Director
Institute for Policy Research and Implementation
Graduate School of Public Affairs

Our Environmental Future: Challenges and Opportunities

by

Douglas M. Costle

If there is such as thing as a political birthday for contemporary environmentalism, Earth Day in 1970 would probably most closely qualify. It certainly marked a turning point in national public awareness of our rapidly deteriorating air and water quality.

I vividly remember the choking smog that affected the east coast that summer, and the sickening awareness that rivers, lakes and streams all over the country seemed to be slowly suffocating from pollution -- even dying. Environmental problems suddenly seemed pervasive, and the need to do something urgent.

Earth Day helped shatter our complacency by galvanizing a potent political movement to alter the forces that were seen to have brought about such a rapid decline in the quality of our environment. Suddenly, the word "ecologist" was no longer a code-word known and used by only a handful of scientists and journalists. Instead, it became a part of our national political vocabulary as we began to mobilize our national response. In a remarkably short period of time, new and tougher laws were passed by overwhelmingly bipartisan majorities in the United States Congress and by state legislatures all over the country. The US Environmental Protection Agency was created to coordinate research, the expenditures of public funds, and enforcement of these laws at the national level. The EPA was soon mirrored by fifty state EPAs in an effort to round out what had become the ongoing, permanent public infrastructure to deal with the full range of environmental problems. Public interest groups grew in size, variety, and stature to lobby for fundamental change in the way we dealt with the public commons. Air and water were suddenly recognized as national assets: public goods no longer to be appropriated freely as private waste disposal reservoirs.

The last twenty-five years have seen dramatic changes take place to fulfill the national political referendum begun on Earth Day, 1970. Today, we spend in excess of $100 billion a year to protect us from or to mitigate a wide variety of environmental problems -- from smog in the cities to the entrophication of lakes; from leachate from abandoned or active waste dumps, to the pollution of rivers and streams; from contamination of drinking water, to the regulation of chemicals in our food supplies. Various forms of government regulations now govern not only what we consider as wastes, but where and how we dispose of them and even who has the burden of responsibility should they ever rise up from the grave.

It is with no small amount of irony, therefore, given today's anti-Washington, anti-government political atmosphere, that we can record some significant environmental gains over the last 25 years. Our air and water are cleaner. Although much of the evidence is anecdotal, it is at least demonstrable. Emissions have fallen (during a period when, it should be pointed out, real GNP grew about 50%). In fact, a look at Eastern Europe is instructive in terms of what pollution might have been like had we not made the effort we did. It is generally viewed to be an

environmental disaster area. In the U.S., in the meantime, the number of fishable, swimmable stream miles has increased dramatically. In short, few would argue that government intervention has been ineffective -- quite the contrary. In this case, government has achieved significant and successful results. Legitimate public policy debate today centers more around efficiency and future effectiveness of the means, not so much the ends.

Government didn't dream up these problems, but we have looked to government to solve them, both by the expenditures of public funds and by changing the ground rules of corporate and private behavior. It is worth remembering that a free-market, free-enterprise system inherently works to the advantage of the private individual and that the role of government in our free, democratic society has always been to secure the broader public interest and to ensure that the dynamic power and pulse of the private economy creates a tide that lifts all boats. It can certainly be said that by 1996, government's role in policing the sometimes fuzzy boundary between the legitimate pursuit of private profit on the one hand, and private activity inimical to the broader public interest on the other hand, had added to it a new and permanent dimension -- an environmental dimension.

It can also be safely said, I think, that environmentalism has become a permanent part of our political value system. Put another way, in less than one generation, we have seen a generational shift of values. As we have climbed the learning ladder over the last 25 years and come to realize the complexity of the environment and our cumulative impact upon it, we are beginning to think differently about the future. The word "sustainability" is now becoming an important word in our national political vocabulary. Moreover, we are far more sophisticated today than 25 years ago in our understanding of the environment and how we must manage our own behavior and that of our industrial economy, if we are ever to find an acceptable accommodation of our many and sometimes conflicting aspirations for both.

If I were to summarize the last 25 years, it would be with the following thoughts: First, environmental concerns and the political activism they have aroused are here to stay. A whole new generation of Americans is growing up having already embraced almost as a birthright the expectation of a cleaner, healthier environment in the future. Second, while tangible progress has been made in dealing with the pollution problems EPA was set up to deal with back in the 70's, progress in which we can take some justifiable pride, we have also gained a deeper insight into how complicated the business of environmental protection really is. New problems have emerged. For example, reflecting the ubiquitous legacy of the chemical age in which we live, we now focus also on toxins prevalent in the environment with uncertain long-term health and ecological effects but which are also less susceptible to the macro-reduction approaches used to deal with the gross pollutants of the 1970s. Third, we are increasingly aware of the truly global dimensions of the environmental problems we face. This alone serves to remind us that much work remains to be done -- about which I will have more to say; and; Fourth, if we didn't have an EPA, or the body of law and regulation it administers, we would have to invent them. As in the oil filter ad, where the mechanic peers under the hood of a smoking engine, then looks up at the camera and says... "Either pay me now, or pay me later..." either way we have to pay.

So, where do we go from here? As we are coming to understand the true global dimensions of this problems, it seems clear to me that our current approach of simply playing "catch-up, clean-up" will be increasingly, indeed already is, inadequate. The challenge will be to make environmental values an integral part of the DNA that shapes the core of economic thinking in the 21st century.

Writing in Foreign Affairs over 20 years ago, George Kennan observed that "our world is at present faced with two unprecedented and supreme dangers: any major war at all among great industrial powers and the devastating effect of modern global industrialization and over-population on the world's natural environment."

The deterioration of the global environment to which Kennan refers has a scale that encompasses the great life-supporting systems of the planet's biosphere. It includes the alteration of the earth's climate and biogeochemical cycles, the accumulation of wastes, the exhaustion of soils, loss of forests, and the decline of whole ecological communities. For almost two decades now, the World Resources Institute has been eloquently and exhaustively documenting the problem and I commend their body of work to you for consideration.

Air pollution now poses a problem for all countries -- increased use of fossil fuels has increased emissions of sulfur and nitrogen oxides. Acid rain, ozone, carbon dioxide now damage public health and hard forest, fish and corps over large areas of the globe. If the buildup of greenhouse gases now underway continues, major climate changes will almost certainly occur. Regional impacts are difficult to predict, but scientists working with the United Nations have recently argued that storms, heat waves, droughts, and other weather anomalies could intensify as more moisture is captured by the atmosphere. Rainfall and monsoon patterns could shift with unpredictable impacts on agriculture. Sea levels could rise, flooding coastal areas. Shifting ocean currents could further alter climate and fisheries. Fewer plants and animal species could survive as favorable habitats are reduced.

Our national concern for the atmosphere must be matched by a growing awareness of the steady deterioration of forests, soils and water in much of the developing world. A number of years ago, the United Nations Food and Agricultural Organization predicted that, without corrective action, rain fed crop lands in the Third World will become 30% less productive by the end of the century because the soil is depleted or eroded. In developing countries, they went on to note, ten trees are cut down for every one planted -- thirty trees for every one in Africa -- and every minute about 54 acres of tropical forests disappear, as do the uncounted species that inhabit them. Most people lack access to basic sanitary facilities, and 80% of all illness is due to unsafe water supplies. Third World people now rank high among those exposed to toxic chemicals -- from lead in Mexico to DDT in China.

Since World War II, growth in human population and economic activity have been unprecedented. The world's population has doubled, and now exceeds five billion, and another billion will be added by the year 2000. The gross world product has increased four-fold since

1950. With these increases have come huge increases in both pollution and pressure on natural resources and ecosystems.

The scale and momentum of global economic activity is hard to comprehend. It took all of human history to get to a point where, in 1900, the world economy reached $600 billion a year. Today, the world economy grows by that much every two years. By the middle of next century (in one lifetime), our human world of five billion people will double again, to ten, and our global economy of $13 trillion will increase at least five-fold. Given the intensity of resource consumption inherent in 20th century industrial technology, just imagine the scale of consumption required to sustain that kind of expansion. Imagine if greenhouse gases, industrial waste and other pollutants increase proportionally with a five-fold expansion of global economic activity and a doubling of the world's population.

I would remind you, also, that of the one billion new people cohabiting with us by the year 2000, 90% will be born in the Third World. By the year 2000, the population of Africa will be four times that of Europe; the population of South Asia will be larger than the entire population of the northern hemisphere, including China; and the size of the working age population could surpass the current population of the world.

I invite you all to engage in the following simple mental exercise. Take three factors: (1) the current rate of world population growth; (2) add a modest assumption of continued growth in GNP (say 3-4%) on the part of developed, industrial countries; and (3) assume economic development sufficient to meet the most basic and legitimate aspirations of the Third World for a decent standard of living. Then lay current technology -- 20th century technology -- down as a ruler pointing to the future through these three points, and one begins to grasp the dilemma soon to be upon us. In fact, it is hard to imagine how we get from here to there. It is far easier to imagine the inhospitable, polluted, and resource-depleted world that we could inhabit, a world in which we will have not only torn to shreds the integrity of the global commons, but perhaps also its very ability to sustain us into the future.

So the challenge is daunting, to say the least. It is no wonder that we are beginning to speak in terms of "sustainable development", that is, "development which meets the needs of the present without compromising the ability of the future to meet its own needs.". That is how the United Nations Commission, chaired by Gro Bruntland, framed the issue over a decade ago.

Can we somehow change the population and industrial dynamics of the 20th century as we move into the 21st? Can technology ride to the rescue? Can we forestall what today seem to be inexorable trends?

Certainly, the most difficult will be the growth in global population. In too many poor countries, a premium continues to be placed on having large families as a strategy for survival. While cultural and religious objections frustrate efforts at family planning, poverty and ignorance continue to be the most obstinate obstacles to a change in attitudes towards family planning. A

rising standard of living in the developing world may be in fact our best hope for change in the dynamics of global population growth. With it may come education, a greater sense of individual control over events in one's life, and a greater sense of self-determination. In the past, those have been formidable factors in flattening out population growth rates, at least in developed industrial economies.

Technology will certainly have to ride to the rescue. The "good news" is that we can outline even today the nature of some of the changes that will have to take place, and which seem achievable within a 50 to 75 year time frame. Once again, the World Resources Institute provides us a useful compass bearing.

For industry, it means transforming from an era of material-intensive, high-output processes to an era that uses fuel and materials with great efficiency, generates little or no waste, recycles residuals, and releases only benign products into the environment. For agriculture, it means redesigning agricultural practices to be both economically and ecologically self-sustaining, stressing low inputs of commercial fertilizers, pesticides, and energy. With the rate of progress we are now witnessing in the field of biotechnology and plant genetics, real gains will almost surely be possible here.

For energy production, a fundamental underpinning for any modern economy, an especially fundamental technological redirection will be required. The world must increase sharply the efficiency with which fossil fuels are used, and over time, reduce our dependence on them. That will mean accelerating the introduction of non-fossil technologies, such as renewable and solar, the diligent pursuit of end-use efficiency, and probably a reexamination of nuclear, as well.

A recent World Resources Institute study indicates that the potential for energy efficiency improvements is enormous. Using generally available technology, the WRI study concluded that both total energy use and fossil fuel use in the United States could be reduced by 40% by the year 2020, while still having GNP per capita double during this period. A global extrapolation of that study suggests that population could nearly double, while at the same time living standards could be improved far beyond satisfying basic needs in developing countries.

Finally, it almost goes without saying, we must phase out CFCs and other harmful gases which contribute to the permanent alteration of the global atmosphere (already being done) and halt deforestation in the tropics and move to net forest growth globally.

Surely, the foregoing transformations can be achieved within a period of 50 to 75 years. Think about the technological changes we have witnessed within our own lifetime, within the last 50 to 75 years, and one should have no doubt about our ability to bring about this "greening" of technology as we enter the 21st century. Indeed, in this age of instant global communications, one can imagine mobilizing a vast network of international scientific and technical skills and harnessing them to the common purpose of fashioning a "sustainable" future.

If the "good news" is that we are not chained to an inexorable technological fate, the "bad news" is that there is no "hidden hand" operating to guide technology into new, more hopeful directions. Whether we have the wisdom and political will to overcome the tremendous inertia of our investment in the status quo remains at the very heart of the matter.

We now realize that traditional forms of economic analysis systematically undervalue natural resources and ecosystems. By failing to estimate properly either the full benefits of natural ecosystems, or the full cost of activities that degrade them, we continue to justify long-term ecological degradation for the sake of present and short-term gain. That is why I said earlier that the challenge lies in making environmental values an integral part of the DNA which shapes the core of economic thinking in the 21st century. We cannot afford to waste much time. Even as the world's industrial countries are beginning to experience rapid economic development and, absent a "green" model, threaten to emulate our 20th century industrial experience.

The truth is, government does matter. Just as the air and water would not have been made cleaner but for the intervention of government (or our food safer, or child labor abolished, or a host of other public benefits achieved which we now take for granted), reengineering our economy to realize a "sustainable" future will not happen without government intervention. Government remains the principal, perhaps the only instrument we have for fashioning a new vision of our national purpose and "securing" the broader "public interest" in a sustainable future. Free markets create private, not public goods, and driven as they are by the desire for private gain, cannot and should not be expected by any but the most naive among us to be the guarantor of our broader public interest. Having been in the private sector for the last 16 years, few of my entrepreneurial and business friends would argue for abolishing the federal reserve system or the securities and anti-trust laws, or a whole plethora of other law which exists to ensure commercial fairness and stability or a host of other benefits they now take for granted. The reality is that we all look to government to set the rules of the road we all live by -- entrepreneurs, businessmen, environmentalists alike.

This makes what is now going on in Washington D.C. with the current Congress seem so pathetically out of touch. Frankly, anyone who examines the public record even casually (a record replete with a blizzard of anti-EPA appropriation riders and self-styled regulatory reform bills) cannot escape the conclusion that the current Congress' purpose has been to gut environmental laws and eviscerate EPA. One proposal, for example, would abolish all environmental enforcement attorneys with the Department of Justice. Another would ban issuance of new discharge limitations and water quality standards. The list extends to over fifty different and specific prohibitions on the implementation of various environmental laws or regulations. One proposal would even eliminate the salary for the head of the U.S. Forest Service, presumably out of Congressional pique for his opposition to accelerating the clear-cutting of our national forests. In fact, the very blatantness of their efforts has been astounding.

For the moment, at least, these efforts seemed to have stalled. However, the debate today seems a sad nadir in the history of Congressional deliberation over national environmental policy --

certainly a far cry from the days when Senators Edmund Muskie and Howard Baker led a bipartisan coalition in search of the national public interest over narrow special interests.

When EPA was created, it came into being in response to a sense of national urgency. That urgency is no less real today -- in fact, in light of what we know today, EPA's role as the most important environmental institution in our national life is even more, not less urgently required. Much of what Congress has done in passing environmental laws over the last 25 years has been improvisional -- improvising solutions to problems, whether it be toxic wastes or smokestack pollution, that had gotten out of control and which required that something be done, and done quickly. Nowhere is it written in stone that improvisation must end when the ink dries on a new law, or a new regulation, or when a court interprets or applies either. We have been dealing, after all, with environmental challenges we scarcely understood, or, in some instances, even imagined 30 years ago.

We should reform EPA. Its real mission has far outgrown the simple "catch-up, clean-up", anti-pollution assignment it was given over 25 years ago. If there are better, more efficient and more effective ways of carrying out its original assignment, we should embrace them. But to walk away from the challenge that we can now clearly see in front of us, to fail to reform EPA in the context of the new global reality would be callous, and should be unthinkable to anyone who seeks the honorable appellation -- public servant.

All said and done, however, the fact that only 25% of the 200 million eligible voters in this country chose to register and vote in 1994 has to make one pause and wonder -- will a "sustainable" future remain, if not beyond our imagination, perhaps beyond our grasp? If so, it will not be for lack of knowledge or the ability to define the broader public interest, it will be for the lack of political will.