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CONVERSATIONS ABOUT THE FUTURE

THE 1994 MINNESOTA CONGRESS ON
SUSTAINABLE
DEVELOPMENT

MINNESOTA SUSTAINABLE DEVELOPMENT INITIATIVE
SEPTEMBER 1994

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Minnesota Planning is charged with developing a long-range plan for the state, stimulating public participation in Minnesota's future and coordinating public policy with state agencies, the Legislature and other units of government.

The Minnesota Environmental Quality Board

The Environmental Quality Board is Minnesota's principle environmental policy forum. Its membership consists of a chairperson and five citizen members appointed by the Governor and commissioners of the departments of Agriculture, Health, Natural Resources, Public Service and Transportation and the Pollution Control Agency, chairperson of the Board of Water and Soil Resources and the directors of Minnesota Planning and the Office of Environmental Assistance. The board receives its staff support from Minnesota Planning.

Conversations About the Future: The 1994 Minnesota Congress on Sustainable Development was prepared by the Environmental Quality Board staff at Minnesota Planning. John Wells was the project leader, and Rolf Nordstrom was the chief author.

The Minnesota Sustainable Development Initiative

Launched in January 1993, the Initiative includes 105 business, environmental and civic leaders working to reconcile social, economic and environmental goals in agriculture, energy, forestry, manufacturing, minerals, recreation and settlement. The Initiative's seven teams identified a vision, principles, barriers and strategies for moving Minnesota toward a sustainable society.

Conversations About the Future: The 1994 Minnesota Congress on Sustainable Development is an open invitation for readers to share their thoughts on how Minnesota can move toward sustainable development. For copies of this report or the Initiative report, *Redefining Progress: Working Toward a Sustainable Future*, or to submit comments and other information, contact the Minnesota Sustainable Development Initiative at the Minnesota Environmental Quality Board.



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SUMMARY

The 1994 Minnesota Congress on Sustainable Development brought together people from diverse backgrounds and perspectives to think about the state's social, economic and environmental future. The congress, held on February 24 and 25, was built around the work of the Minnesota Sustainable Development Initiative's seven citizen teams and provided the first public forum for discussing their reports on sustainable agriculture, energy, forestry, manufacturing, mining, recreation and settlement. The congress' main goals were to:

- Educate Minnesotans about the concept of sustainable development in general and the work of the seven Initiative teams in particular;
- Expand commitment to sustainable development in Minnesota by inviting public feedback on the Initiative's results; and
- Use information from the congress to help guide Minnesota toward sustainable development.

Sustainable development means meeting the needs of the present without compromising the ability of future generations to meet their own needs. To translate this theory into everyday practice, the Minnesota Sustainable Development Initiative was created to foster a future in which Minnesotans work together to sustain their communities, their economic security and the natural environment that makes both possible. — *Redefining Progress: Working Toward a Sustainable Future*

This document is not just a summary of the congress but a companion to the Minnesota Sustainable Development Initiative's year-end

report, *Redefining Progress: Working Toward a Sustainable Future*. It attempts to capture the essence of the speakers' presentations and the main advice participants offered on the Initiative's future priorities.

While it is difficult to distill two days of creative thinking about a subject as complex as sustainable development, congress participants' advice included the following:

- Establish a comprehensive education campaign. Minnesotans must work to educate all levels of society, from citizens to policy-makers, about sustainable development concepts and principles.
- Develop reliable sustainable development indicators. The state should develop sustainability measures and data bases that integrate social, economic and environmental information for citizens and decision-makers throughout society.
- Ensure that government incentives and disincentives promote sustainable behavior. A priority in the Initiative's second phase should be to identify, quantify and define which programs and policies promote sustainable development and which do not.
- Implement full-cost accounting. Minnesota governments and policy-makers should plan for the long term using a full accounting of social, economic and environmental costs and benefits.
- Establish sustainable development as formal state policy. Governmental activities, laws, and administrative and investment policies should be coordinated based on sustainable development principles.
- Develop a process for reorienting tax policy. The Legislature should change tax conditions to support and promote sustainable development in both the public and private sectors.

- Encourage community control over decision-making. The state should promote community control over development decisions and reward communities that implement sustainable development plans.

- Establish public-private alliances. The private sector must work with government to implement full-cost accounting. Both must form strategic alliances to set common goals and strategies for achieving sustainable development.

- Promote comprehensive land use planning. The state should require local land use plans that include an urban growth boundary; the state also should set guiding principles, provide technical assistance and other incentives, and report on Minnesota's overall progress toward achieving sustainable levels of development.

- Encourage grassroots initiatives. The Governor, the Legislature and the Environmental Quality Board should encourage sustainable development initiatives at the grassroots level.

- Foster community roundtables. Communities should establish culturally diverse, ongoing roundtables on sustainable development to guide local and regional planning.

Based on the work of the Initiative's seven citizen teams and on this advice, the Environmental Quality Board will collaborate with other public and private interests to achieve the following major objectives:

- Develop and introduce a legislative package of key policy changes drawn from the Initiative (July 1994 to May 1995).

- Make state government a model sustainable enterprise through executive and legislative actions establishing sustainable development as a formal state policy (ongoing).

- Develop a six-year strategic plan for sustainable development that includes an agenda for implementing and institutionalizing the Initiative's recommendations (July 1994 to June 1995).

- Establish a coalition for sustainable development to guide the Minnesota Sustainable Development Initiative on the actions the state should take to achieve sustainable development (1995).

- Collaborate with legislators and environmental, civic, business, educational and religious leaders to achieve the above goals (ongoing).

A NEW DEFINITION OF PROGRESS

In February 1994, some 400 Minnesotans and others gathered to rethink what progress means in this state. Though they came with diverse backgrounds and opinions, participants of the 1994 Congress on Sustainable Development seemed to agree on at least three things:

- The quality of life in Minnesota hinges on more than the size of the gross state product.
- Minnesota must create economic opportunities that improve its competitiveness and maintain and restore its natural resources.
- Business, government and civic leaders must work to gradually alter Minnesota's economic system so that what is good for people is also best for the natural world that sustains the state. In part, this means changing laws, regulations and tax policies to reward environmentally and economically sustainable behavior and make harmful, inefficient activities more expensive.

As a new definition of progress, sustainable development means promoting economic development that provides high-quality jobs, products and services without degrading Minnesota's true source of wealth — the environment. Sustainable development means improving the quality of life while respecting the earth's limited capacity to regenerate resources and absorb waste. It also means considering the impacts of decisions made in Minnesota on other parts of the world and on future generations. As one of the congress speakers, Paul Hawken, persuasively argued, a sustainable society would operate on the same principles of efficiency that nature does. It would create little or no waste. It would operate largely on current energy provided by the sun rather than on past energy stored in fossil fuels. And it would be resilient and adaptable because of its great biological, cultural and economic diversity.

These are just some of the ideas that emerged from the Environmental Quality Board's Congress on Sustainable Development, "Redefining Progress: A Workshop on Minnesota's Future." The congress provided people from many walks of life an opportunity to learn about and discuss how Minnesota might achieve sustainable development. The two days of discussion focused on the report, *Redefining Progress: Working Toward a Sustainable Future*, which documents the results of the Minnesota Sustainable Development Initiative's first phase. The report offers specific strategies for sustaining and enhancing Minnesota's environment, economy and social well-being.

The congress was the culmination of a year-long effort by 105 business people and environmentalists to reconcile commercial activity with environmental limits and consider the social impacts of both. The Minnesota Sustainable Development Initiative asked these citizen volunteers to identify ways to sustain seven sectors important to Minnesota's future: agriculture, energy, forestry, manufacturing, minerals, recreation and settlement. Their seven reports represent the foundation upon which Minnesota can build a sustainable future.

As a companion to that work, *Conversations About the Future* aims to convey a sense of what transpired at the congress and to share what participants think of the Initiative's results thus far. The next section briefly excerpts the main themes and salient remarks from each speaker's presentation. The following section summarizes the feedback congress participants gave to each of the seven teams. The final section outlines participants' advice on the next steps they believe Minnesota should take toward sustainable development and the Minnesota Environmental Quality Board lays out its proposed work plan for phase two of the Initiative.

SPEAKER PRESENTATIONS

What follows are synopses of the remarks speakers gave throughout the two-day congress. They are presented here in the order in which they were given. While these are largely paraphrased versions of what was said, the ideas and sentiments expressed are those of the speakers.

WELCOME

Bob Dunn, chairperson of the Minnesota Environmental Quality Board

This congress is a momentous event in what has already been a year-long Initiative to chart a more sustainable course for this state. What we are undertaking today is nothing less than redefining what progress is in our world. The Minnesota Sustainable Development Initiative is a long-range, comprehensive approach to reconciling economic activity with ecological principles. The next two days represent a unique opportunity for diverse interests to discuss and plan for the long-term economic and environmental health of our state.

We are very accustomed to devoting our lives to meeting the demands of today's problems. Yet we have gathered here today because we all recognize our common responsibility to pass on a healthy environment and strong economy to future generations. Meeting that responsibility squarely is what this congress is about.

During the congress, you will be asked to think critically about how Minnesota can reconcile the interdependent goals of economic security, environmental health and social well-being. Learning to live and prosper without degrading the natural systems that sustain us will require that we consider amazingly complex relationships involving such things as:

- where we live and work;
- how we move our people and products;

- what products we make and buy;
- how much of our natural resources we use to produce those products; and
- even how we define and measure progress.

It is time to reexamine every facet of our lives and ask the question of ourselves, "Could we do it this way forever?" We want this congress to be the start of a long-standing discussion about sustainable development and what it should mean in Minnesota.

We are very accustomed to devoting our lives to meeting the demands of today's problems. Yet we have gathered here today because we all recognize our common responsibility to pass on a healthy environment and strong economy to future generations. Meeting that responsibility squarely is what this congress is about. — *Bob Dunn*

To guide our discussions, it may help to remember that many of the themes of sustainable development are rooted in the Minnesota Environmental Policy Act, which was enacted in 1973 to:

- Create and maintain conditions under which human beings and nature can exist in productive harmony;
- Encourage, through education, a better understanding of ecological systems;
- Fulfill our responsibility as a trustee of the environment for succeeding generations; and
- Develop and grow in ways that are environmentally acceptable.

Given that the Environmental Policy Act was written 21 years ago, it is striking that so many principles of sustainable development are already in Minnesota law.

It seems to me that your very presence here reflects the current global shift in thinking about how we can meet the legitimate needs of the world's growing population without irreparably damaging the environment that supports us all.

Like realizing that the world is round and not flat — it is that kind of watershed point in history — we are rediscovering our true relationship to the world we inhabit. Something of this magnitude is bound to be unsettling, so I would ask that you try to understand and respect one another's views as we proceed.

KEYNOTE ADDRESS

Governor Arne H. Carlson

Most of society is committed to the idea that public discourse cannot occur without extremist positions. Both the general public and the media tend to frame debates this way. Because of this focus on extreme positions, a thoughtful, meaningful dialogue is sometimes very difficult. Yet, many of us are beginning to realize that society cannot always afford to choose between extremes. The very concept of sustainable development suggests that the extremists are wrong. We cannot have a healthy economy for very long without maintaining and restoring the environment that supports that economy. Conversely, we cannot cordon off the natural world as if humans have no place in it and as if we can lead prosperous lives without using the earth's resources.

This governor and this administration are committed to balancing job growth with environmental quality. Somehow we have to achieve a level of social and economic development that is compatible with the environment, and those nations that achieve that balance first

will be those societies that ultimately succeed. I firmly believe that we can have inherently sustainable businesses that grow and prosper while creating quality employment opportunities and preserving a quality environment.

We cannot have a healthy economy for very long without maintaining and restoring the environment that supports that economy. Conversely, we cannot cordon off the natural world as if humans have no place in it and as if we can lead prosperous lives without using the earth's resources. —
Governor Arne H. Carlson

Minnesota has been a leader and will continue to be a leader in the environmental field, with its emulated wetland legislation, its Reinvest in Minnesota program, and the enormous amount of money we spend for parks, forestry and other environmental concerns. These are the kinds of investments that sustain and preserve the quality of life for Minnesotans today and in the future.

Minnesota does not have a lack of environmental laws, rather there has been a lack of management skills and talents to make these laws a reality. We are trying to get the state out of the "how-to" business and simply into the business of measuring outcomes. We want to work with the private sector to identify common goals and to correct the economic signals companies receive so that actions that make good business sense also make sense for the environment. Once the signals are right, government can get out of the way and let business do what it does best. That is, channel its considerable resources and ingenuity toward achieving specific goals.

We should not assume that just because someone is in the business of economic development that they are polluters and have no concern for the environment. Rather, we should

rest on the assumption that we all care for the environment and want to improve it. From this basis, we can build partnerships that are based on mutual respect and concern so that we can leave the state in better shape than when we came in. The Environmental Quality Board's Sustainable Development Congress is a testament that we can all work together and accomplish dramatic results by these partnerships.

We want to work with the private sector to identify common goals and to correct the economic signals companies receive so that actions that make good business sense also make sense for the environment. — *Governor Arne H. Carlson*

If anybody doubts the viability of these partnerships, then let us ask ourselves why we are here today. This congress is a testament to the fact that everyone here believes we can accomplish more by working together than by constantly fighting each other. We simply do not have the resources to waste them fighting. Each of us needs to take this position: "I love Minnesota so much, that for the balance of my life I am going to leave this state in better shape than when I came into it."

GLOBAL CONTEXT

David T. Buzzelli, co-chairperson of the President's Council on Sustainable Development; vice president and corporate director of environment, health and safety and public affairs for the Dow Chemical Company; and a member of the Business Council on Sustainable Development

Minnesota is an enormously wealthy state in terms of its natural resources, beauty and its people. Minnesotans are taking the theory of sustainable development and are turning it into action not only at the state level but at the local level as well.

The key to sustainable development is localization; it means working toward very tangible strategies and actions on the community and state level. The Initiative you have in Minnesota is a great beginning for this state and for other states and, in fact, for other countries. The Minnesota Sustainable Development Initiative brings together government, industry and environmental groups and uses a consensus-building approach to improve the decision-making process.

The vision of sustainable development puts us on a very different course than what we have been on before. Sustainable development implies that there cannot be economic development without a strong sense of environmental protection and environmental improvement, but it also says exactly what your governor just told you: it says that environmental reform can be the genesis of jobs and can be a competitive advantage for companies, for states and for countries.

The essence of sustainable development is that the economy and the environment are not competing issues but are instead complementary. In the past, the environmental approach was controversial and very adversarial. Today, business, government and environmental leaders all sit at the same table, realizing that environmental protection and economic growth go hand in hand and that they are absolutely coupled and cannot be separated.

Environmental issues have to be integrated into all business decisions, plans and strategies because the environment is now a business issue. If you ignore environmental issues, you are putting the future of your business at risk. Sustainable development is a challenge to businesses large and small. Business strategies must include eco-efficiency as a goal, which means making most efficient use of natural resources while at the same time minimizing waste. The concept of eco-efficiency will succeed because it makes business sense.

Business also needs to internalize social and environmental costs and encourage self-regulation as opposed to governmental control. Full-cost pricing is a highly controversial subject because we get caught up in the details of how we put monetary values on loons, lakes, and so on. Do not get trapped in these details. Think about the larger concept of paying the full costs of our activities. As we begin to internalize costs, companies that do not will simply become obsolete. Government and business ought to establish and agree upon a clear set of priorities. We should rely on pollution prevention rather than end-of-the-pipe solutions to address our environmental concerns, and businesses should develop a consistent, worldwide approach.

Full-cost pricing is a highly controversial subject because we get caught up in the details of how we put monetary values on loons, lakes, and so on. Do not get trapped in these details. Think about the larger concept of paying the full costs of our activities. — *David Buzzelli*

The largest single barrier to sustainable development is the lack of trust that exists. The first step businesses can take to improve that level of trust is to establish a public outreach program that includes open, candid dialogue and a proven performance record. Sustainable development can be achieved if we all work together. The public says it wants both cleaner and cheaper products, and using this sustainable development approach, we can achieve both.

David Runnalls, director, Environment and Sustainable Development Program, Institute for Research on Public Policy, Ottawa, Canada

The Brundtland Commission's report, *Our Common Future*, indicates that we are losing 19 million hectares of forest per year. Large

amounts of land are being subject to desertification. Climate change and ozone depletion are already occurring. We have over 5.5 billion people on earth, and we will have over 10 billion by the middle of the next century. To provide a European-style standard of living to these 10 billion, we would have to triple food production, increase our natural resource use by 400 percent, and increase our energy use by 500 percent. The increased demands on natural systems would be mind-boggling and are surely not sustainable. The old development paradigm will not work anymore.

If you are undergoing a profound economic restructuring, it is an ideal time to undergo the same sort of restructuring that is necessary to produce an economy for the future that is environmentally sustainable. — *David Runnalls*

These sobering facts, along with Canada's growing awareness of its own problems, led to the creation of roundtables on the environment and economy. These roundtables included CEOs, senior politicians, major environmental leaders and representatives from society at large. There is now a national Canadian roundtable, roundtables in every province and many local roundtables where people have come together to figure out not how you balance the environment and the economy but how you integrate the environment into economic decisions. It is not a balancing question, it is a question of getting to the stage where before any economic decision is taken, the environmental impacts are considered and built in.

Through a long consensus-building process, Canada has reached a common point of discussion. Seven task forces consulted with local citizen groups and brought back to the roundtables their local definitions of sustainable development.

The principle themes that guided this sustainable development effort included the need for corporate accountability, where corporations were to recommend a public reporting mechanism and codes of practice for various industries. The legislature was asked to create a commissioner for sustainable development who would head an independent body (like the U.S. General Accounting Office), charged with reporting the status of Canada's sustainable development efforts on a regular basis.

There was wide recognition that we need sustainability criteria so that all decisions can be judged on their degree of sustainability. Other themes were that Canada should periodically set new targets, gradually implement full-cost accounting and move away from command-and-control regulation toward an incentive-based approach.

To provide a European-style standard of living to these 10 billion, we would have to triple food production, increase our natural resource use by 400 percent, and increase our energy use by 500 percent. The increased demands on natural systems would be mind-boggling and are surely not sustainable. The old development paradigm will not work anymore. — *David Runnalls*

These are tough issues for Canada at this time. We have high unemployment, increasing pressures from global competition and stagnant economic conditions both at the national and provincial level. Yet, if you are undergoing a profound economic restructuring, it is an ideal time to undergo the same sort of restructuring that is necessary to produce an economy for the future that is environmentally sustainable.

Jonathan Lash, co-chairperson of the President's Council on Sustainable Development and president of the World Resources Institute (In Lash's absence, his remarks were read by David Buzzelli.)

Growth in the world's population and economy are creating increasingly severe stresses to natural systems. All of the basic natural systems are being influenced by human activity. Trends that are now occurring in natural systems as a result of this human activity include:

- Changes in the chemistry of the atmosphere in ways that are now affecting our climate.
- Severe soil degradation.
- Forest depletion.
- Ocean systems that are being devastated.
- The loss of biological diversity.
- The toxification of the environment.

These trends are accelerating and are a direct consequence of over 5 billion people living on earth today.

During the lives of our children, global population will double. How should we meet the needs of 10 billion people? I believe this is the central problem of our time.

If these 10 billion people are to have any kind of life, global production of goods and services must at least quadruple. We will need to find smarter and more efficient ways to produce and consume while at the same time prevent degradation to the environment and the natural systems on which we depend. This is the essence of what we mean by sustainable development.

We will have to use our ingenuity to forge new partnerships between old adversaries, in effect creating an integrated approach wherein business, industry and environmental leaders will join together to formulate new goals and new processes.

During the lives of our children, global population will double. How should we meet the needs of ten billion people? I believe this is the central problem of our time. — *Jonathan Lash*

We have a mandate from President Clinton to change the way environmental policy is made, from confrontation to partnership, from gridlock to progress, and we understand that change does not come from Washington, D.C. It comes from the country to the capitol.

Good economic policy protects the environment; good environmental policy sustains and supports the economy. — *Jonathan Lash*

The President's Council on Sustainable Development is the administration's most significant environmental initiative. It will embody this new cooperative approach to environmental policy while working to create a new set of national goals that meet this country's environmental and economic needs. Good economic policy protects the environment; good environmental policy sustains and supports the economy.

MINNESOTA CONTEXT

Hazel Reinhardt, president of Hazel Reinhardt Consulting Services and former Minnesota state demographer

The relationship between population and the environment was important 20 years ago, and today, as the numbers increase, this troubled relationship gains even more significance. The world population will reach 6 billion in the year 2005. India will supplant China as the most populous country, and there is a global movement of people seeking out new and better economic opportunities.

In the United States, trends indicate we are getting older, our population is becoming concentrated in metropolitan areas, and immigration is increasing. In 1950, there were only 12 places in the United States with greater than one million people. Now there are 41. The irony of this centralization and regionalization is that once within these population centers, we see enormous dispersion. People spread out. They want to be nearer to places with amenities but also want to distance themselves from urban centers and from one another.

In Minnesota, there are now enormous disparities between the rural and metro areas. The rural areas are losing population, becoming more elderly, and their income is usually generated from a single source, such as agriculture (the main source of income for 37 percent of Minnesota's counties).

People initiate change or resist change based on their real and perceived needs. Change often stems from:

- *Advances in information technology* — Information transfer is worldwide, rapid and ever-more efficient.

- *Advances in biotechnology* — Biotechnology is a fast-moving field, with knowledge doubling every three to five years.

- *Economics* — We now have to compete in a global economy.

- *Values* — We are now observing a new tribalism, where ethnic groups and nations are

fighting to remain distinct, and a new globalism in which the ease of travel, computer technology and telecommunications are fostering global businesses and citizens.

As we think of sustainable development in Minnesota, and as we think about some of the challenges that are in front of us, we cannot afford to ignore where people are or the circumstances of their lives today and how they perceive their future, the future of the state and what they would like to see.

The relationship between population and the environment was important 20 years ago, and today, as the numbers increase, this troubled relationship gains even more significance. —
Hazel Reinhardt

The 20th century is over, and we are about to begin a new era, a transition period wherein we will have to confront the relationship between population and the environment.

TOWARD SUSTAINABLE SOCIETY

Robert Gilman, Ph.D., director of Context Institute, which provides research, education and consulting on issues of sustainable development, and editor of *IN CONTEXT: A Quarterly of Humane Sustainable Culture*, Bainbridge, Washington

I have always thought that the Twin Cities was one of the more civilized parts of the United States. The Minnesota Sustainable Development Initiative is just another example of this state's "civilization." Like other speakers, I am really quite impressed with what Minnesota has done so far. But, as has already been suggested, it is just the first step.

We face two distinctly different possible futures. The first is a continuation of the status quo and leads to what ecologists call overshoot and collapse, where population and industrial

production per capita overwhelm the natural systems that support us. The danger of this path is that if you wait until it peaks before trying to fix things, it is often too late. Avoiding this future requires foresight and preventive action.

The second possible future leads to a stable and sustainable human population and per capita production. The world's people are able to meet their needs while respecting environmental limits. To realize this future, we must make changes in three major areas: technology, consumption and population. This is the three-legged stool of sustainability. Without all three, the stool falls. For example, if we only improved the efficiency of our technology but population and consumption continued to grow at their current pace, we would only postpone the time when the sheer numbers of people and their consumption would overwhelm any technology gains. The good news is that there is so much waste in our present system that we have a great deal of room for improvement. We must stabilize our level of consumption. This does not mean we have to stop making improvements in our material quality of life. Increases in the life and usability of products, and a new focus on quality over quantity could lead to dramatic improvements without undue environmental harm.

Another useful way to understand "what time it is" in human development is to consider our evolution over time. Over the past 40,000 to 50,000 years (the span of time most agree covers the life of modern humans), we have gone from a tribal period to an empire period and are now in transition toward what I would call the planetary period. Many of our current environmental problems are really symptoms of larger social changes. Part of what makes modern life seem so schizophrenic is that our cultural heritage, our institutions, stories and myths all come out of the empire period, while our life experiences fit more closely with characteristics of the new planetary era.

We are in the midst of a cultural transition as profound as the shift out of hunting and gathering and into cities. This transition will not take place tomorrow. In fact, it really began with the Renaissance and may continue for the next 100 years. But if we are to avoid overshoot and collapse, we must act now. I believe, along with many other scientists, that the 1990s is the decade of decision. Either we start ourselves down a new path, or we will find that we have run out of mobility space and are stuck on our present path. This situation invites us to rethink our institutions in very profound ways. What you have begun with the Minnesota Sustainable Development Initiative is a very important step in doing that.

If we only improved the efficiency of our technology but population and consumption continued to grow at their current pace, we would only postpone the time when the sheer numbers of people and their consumption would overwhelm any technology gains. —
Robert Gilman

I would now like to discuss two very different views of economic reality. The traditional economic model is an intellectual embarrassment. This model, found in virtually any economics text book at any university, says that land, labor and capital converge to produce goods and services, and that consumption equals increased utility and human welfare. Notice that according to this model, consumption is the only way to increase quality of life. This is really the economics of firms. What we need is a more community-based accounting of how we are doing.

The second, “sustainable” economic model attempts to bring economics into the real world. Instead of limiting itself to land, labor and capital, this model describes five “reservoirs of wealth”: 1) environmental capital; 2)

human capital; 3) social and organizational capital; 4) manufactured capital; and 5) credit capital (which you can think of as society’s safety net). Taken together, these translate into human activity, which, in turn, determines our quality of life. The way we allocate our time to each of these five areas determines our quality of life.

We are not really going to get on to sustainable development until there are equal seats at the table for people concerned about human capital, social and organizational capital and credit capital. We need to bring all these factors together.

The first step for any community, state or nation interested in sustainable development is to assess how strong you are in each of these five reservoirs. Are you investing enough in each? A shorthand definition of a sustainable society is one that uses but does not drain its reservoirs. Step two on the road to sustainability is to become as efficient as possible in maintaining those reservoirs of wealth. Use as little material resources and human time as possible to fill your reservoirs. What that will do is free up more resources for your later use or use by future generations, and it will free up time. I would guess that most of you in this room are more time-poor than material-poor.

We are in the midst of a cultural transition as profound as the shift out of hunting and gathering and into cities. —
Robert Gilman

What has not yet entered into the debate around sustainable development is the fact that we are assuming a 40-hour work week is a God-given law. In truth, if we are really good at sustainable development, we will find that we do not have to spend as much time in the marketplace. We can spend it with our families and in our communities. If society can

provide itself with adequate capital (all five kinds) and do it with 20-hour weeks, we should all be cheering.

Finally, I want to applaud you again and cheer you on. I look forward to the leadership Minnesota will continue to provide. My guess is that you can rise to the challenge.

George Honadle, Center for Natural Resource Policy and Management, University of Minnesota (moderator)

There are two general approaches to public policy: command-and-control regulation that dictates specific practices and outcomes, and incentive-based approaches that rely on market dynamics to achieve their goals. The next several speakers, however, will be talking about a third, less common, approach called "stakeholder self-management," where most decisions occur at the local level. These are mostly stories about communities taking responsibility for their future, agreeing on common goals and working collaboratively to improve and sustain their quality of life.

SUSTAINABLE COMMUNITIES

Marian Chambers, executive director of the Jacksonville Community Council in Jacksonville, Florida

Our planet hums with a growing awareness of connection among people, land, water, air and all life forms. This web of connections has a rhythm and balance that we human beings are just beginning to understand. We know that when these connections become unbalanced, we see violence, crime, teen pregnancy, air pollution and all kinds of other social, economic and environmental problems.

In the past, we have equated progress with traditional economic indicators and have been consumed by the ideology of consumption. Today, as we are shifting toward a more earth-based ethic and realizing the interdependence

of all living things, we are asking some serious questions about the real measures of our quality of life. This is a paradigm shift toward living sustainably.

When Jacksonville's citizens and chamber of commerce joined us to design and model our quality of life, we ended up with nine indicators: education, the economy, public safety, the natural environment, health, the social environment, government and politics (including participation in public affairs, leadership and public policy), culture and recreation, and mobility. The Quality Indicators for Progress program was designed to improve the quality of life in Jacksonville and not to compare ourselves with other cities.

Our planet hums with a growing awareness of connection among people, land, water, air and all life forms. —
Marian Chambers

The criteria used to select these indicators were validity, reliability and stability, availability and timeliness, understandability, whether or not they would lead rather than lag behind reality, their responsiveness, policy relevance and representativeness.

Various subcommittees then studied Jacksonville's current indicators of progress under each category. They wanted to know where we had been, where we are headed and the progress being made. In these studies, it became apparent that there were more important questions than just how is the economy faring? For example, how are the people and the environment faring? Yet one of the problems that continues to stymie our moves toward sustainable development is a lack of cohesive data. Part of the challenge in Jacksonville was to develop indicators for which we could gather relevant information.

Although the Indicators project is really a planning and evaluation tool, and not an action tool, it is still used by policy-makers, citizen groups, the media, civic leaders and schools to assess where we are going. To help set policy priorities, we select the most important indicator within each of the nine categories. It gives us an overview of our progress each year and lets people know that there are things more important than economics. Jacksonville is clearly not alone in wanting to define progress in new ways, as other cities have wanted copies of our quality of life indicators.

Barbara Uppgaard, chairperson of the Crow Wing County Board of Commissioners, and **Cheryl Gelbmann**, Crow Wing County commissioner

Crow Wing County is located in central Minnesota in the heart of lake country, where tourism is a major industry. Its population of 44,000 can triple during vacation seasons and is one of the few nonmetropolitan counties in the state that is experiencing growth. Crow Wing County is a graying, retirement community and a regional center with many government employees.

The county needed to update a 22-year-old comprehensive plan, implement new Department of Natural Resources shoreland rules, wetland legislation, Mississippi headwaters rules and flood plain ordinances. To consolidate these issues, we felt we needed direction and guidance to create a workable plan. We formed committees to discuss these issues. The committees included citizen volunteers, staff from the county planning and zoning boards, a member of the County Board of Adjustment and a Planning Commission member. Although we were not completely sure of our focus, we knew we needed to do something and needed to have the community behind us. Input from township boards helped ensure grassroots support.

We hired a consultant to develop a planning process based on principles of sustainable development. Sustainable development is exactly what we need in Crow Wing County. We need jobs, we need our lakes and our environment, and we need our quality of life.

Our main objectives are to expand, diversify and improve job opportunities in Crow Wing County, to sustain and enhance resource productivity and improve the environmental qualities and aesthetics and to improve the quality of life for each resident and visitor.

Sustainable development is exactly what we need in Crow Wing County. We need jobs, we need our lakes and our environment, and we need our quality of life. — *Cheryl Gelbmann*

A major principle of the process was to balance the perceived competition between economic and environmental needs. We included a long-term vision process so that we would not only learn from the past and evaluate our current condition but also establish future goals. Focus groups from all segments of society participated.

Sustainable development will not happen until it takes place among local governments. — *Cheryl Gelbmann*

Other communities need to carry out similar sustainable development initiatives, where public input is continually used and implemented. The Crow Wing County initiative needs to have access to the best information possible. Any successful sustainable development effort needs to have the most accurate

and complete data possible and must take a holistic approach. If we are to get local decision-makers into this process, the state will need to provide more funding at the local and small town level. Sustainable development will not happen until it takes place among local governments.

CHANGING THE RULES

David Morris, vice president of the Institute for Local Self-Reliance

We have heard some inspiring stories of what is possible at the community level, and those offer reason for great hope. But one thing we have not yet agreed on is that we are doing anything wrong, either in Minnesota or nationally. There seems to be a great deal of denial. Yet 20 percent of the world's population is still using 90 percent of its resources. We in Minnesota are part of that. Minnesota's per capita solid waste is going up, population density is going up, family farms are growing ever-more endangered and there are more families living in poverty. We have made a series of momentous decisions that have led to this state of affairs. I think we need to admit to ourselves that we are still going in the wrong direction, if at a slower rate. The question is not how to slow the rate [of deterioration] but how to change course.

We should not ask ourselves at the end of this congress, "What do I know now?" but rather, "How will it change my behavior?"

The question is not how to slow the rate [of deterioration] but how to change course. — *David Morris*

Back in February of 1993, the Clinton Administration proposed a BTU tax on nonrenewable fossil fuels. It would have raised energy prices 6 percent, yet homes and businesses could easily have saved the equivalent in a very

short time. Minnesota would have developed a three-year plan to reduce state consumption by 6 percent, generating new jobs, new businesses and making the economy more efficient. Unfortunately, the complete opposite happened. Unions and state officials mobilized and opposed the BTU tax. Would we really react differently today should the president introduce such a measure again?

Or how about solid waste? State Representative Willard Munger has introduced a packaging bill three times in an effort to reduce solid waste in this state. If we all agree that packaging waste is a problem, then why doesn't the packaging industry itself do something? The Minnesota Environmental Coalition was formed to defeat those bills and to fight environmental legislation generally.

Perhaps no single factor has contributed more to the dislocation and deterioration of our communities or contributed more to environmental degradation than our excessive reliance on the automobile. — *David Morris*

Next week, the Legislature will take up the issue of Northern States Power Company's proposal to store spent nuclear fuel in casks outside its Prairie Island facility in Red Wing. Yet the energy team report of the Minnesota Sustainable Development Initiative does not include the words *nuclear power*. If sustainable development means anything, it means not burdening our children's children with this poisonous waste. We must deal responsibly with this issue. Can we in good conscience continue to generate nuclear waste? We are not a desperate people. We do not have to continue with nuclear energy. Eliminating it would raise our rates no more than the BTU tax would have.

And then there is transportation. Perhaps no single factor has contributed more to the dis-

location and deterioration of our communities or contributed more to environmental degradation than our excessive reliance on the automobile. The biggest "brown tax" in Minnesota is the gasoline tax, which, according to the state's constitution, can only go toward building and maintaining roads, which, in turn, creates more demand and more consumption of gas. We need to be able to use our gas taxes more creatively.

Change only results when the rules change, which happens only when a great number of people, at some risk to themselves, insist that the rules be changed. Right now, our elected officials are making decisions that can change the rules. Their charge should be to change these rules so we can channel our efforts into redefining progress.

George Honadle, Center for Natural Resource Policy and Management, University of Minnesota (moderator)

Having listened to our panel speakers, it seems to me there are three main themes that emerge. The first has to do with data. How can we know where we are so that we can measure where we are going? Without accurate information about our current situation, we will not know whether we are becoming more or less sustainable. Unfortunately, much of the data we collect now may be inappropriate for our purposes. We need to think about what the right indicators of sustainability are and find ways to chart those.

Without accurate information about our current situation, we will not know whether we are becoming more or less sustainable. — *George Honadle*

The second major theme from this morning's speakers is the idea that communities must forge a common understanding of what sustainable development means and what they

would like to sustain. Multilevel involvement (from all stakeholders) at the local level seems to be the best way to do this, since the specifics of what is or is not sustainable will surely differ from place to place.

Finally, we are reminded that while it is vitally important to focus on building consensus, sometimes we need to be jolted. We must always recognize what we are not doing right. The very idea of sustainable development suggests that our present approach to development is not sustainable.

We need to think about what the right indicators of sustainability are and find ways to chart those. — *George Honadle*

This congress is structured like a funnel. We started with broad generalities about what sustainable development might mean at the national and international level, and now we are working our way down to specifics at the community level and to the detailed strategies proposed by the seven Minnesota Sustainable Development Initiative teams. That is, we are moving from discussions about where we want to go to how do we get there.

One way of keeping this in perspective is to consider some of the insights that management theory offers us. Much of the literature on effective management centers on managers' different spheres of control. In the world of managers, their sphere of actual control is very small. Yet they have a larger sphere of influence in which they can sway others. Then there is a still larger sphere of appreciation where managers cannot control or influence outcomes but can only observe what is going on. I would suggest that these different spheres of human influence provide a useful way to categorize the Minnesota Sustainable Development Initiative's strategies.

In summary, there are perhaps four categories of action we should pursue in the coming years:

■ *Actions we control* — the government's ability to use procurement practices and buying power to create markets for environmentally friendly products.

■ *Actions we influence* — changes in laws and regulations, where one must influence those who have the power to make changes.

■ *Actions we observe* — natural processes that we must strive to understand.

■ *Data collection and management* — looking at the measures of progress we use (for example, the GNP or GSP, which gives an incomplete picture of how we are doing as a nation and state).

Communities must forge a common understanding of what sustainable development means and what they would like to sustain. — *George Honadle*

I would like to end my remarks with a brief quote from Jose Ortega y Gasset: "Life cannot wait until the sciences have explained the universe scientifically. We cannot put off living until we are ready. We have to start now." Given the world's exponential population growth, we must take up the challenge of sustainable development today.

REDEFINING BUSINESS

Paul Hawken, entrepreneur, writer and lecturer on building a sustainable society and author of the award-winning book, *The Ecology of Commerce*

The commercial-industrial system and the natural system dominate our lives, yet there

has been virtually no dialogue between them. As the title of my book, *The Ecology of Commerce*, suggests, we must find ways to marry these two great systems if we are to achieve sustainability. Instead of a linear commercial system where we take natural resources, produce goods and services and throw most of what we use away, we must reinvent a more cyclical, more ecological economy that approaches the resource efficiency found in nature.

The design template for a new commercial system is all around us, in nature itself. — *Paul Hawken*

Thus far, the approach we have taken in trying to reconcile human activity with environmental limits has caused distrust, anger and resentment. The relationship between science and commerce has not been effective. We have created an industrial system that believes that it is cheaper to destroy the earth than to save it. In fact, business exists in a kind of schizophrenic atmosphere. We have told businesses to provide us with the cheapest products of comparable quality, so they do it, and we reward them with market shares, profit, and so forth. Now, we are saying that we want them to internalize social and environmental costs but do not want to pay any more. Businesses trying to comply will find themselves at a cost-price disadvantage.

We cannot base our vision of sustainable development on guilt, moral principles, values and mandates, because everyone's moral compass is different. — *Paul Hawken*

When I was in business, I was very often frustrated, both as a businessperson and an environmentalist, because there were things I

wanted to do (environmentally) that simply did not make business sense. If we want businesses to behave differently, we need to send them the right economic signals.

Living sustainably must be something everyone (all 5.5 billion people) wants to get up and do everyday, voluntarily, because we want to, not out of guilt.
— *Paul Hawken*

Companies are great at setting prices but lousy at recognizing costs. Businesses need positive incentives to internalize the environmental costs they have traditionally passed on to the air, down the river or injected into deep wells. We essentially have a take-make-waste system in which 83 percent of what we make is thrown away after one use. This is tremendously inefficient and represents a serious design flaw in our commercial system. Even if businesses were to cut all waste, their products are still out there, and they have to go somewhere after their useful life is over.

We need to reexamine the design of our economic system. Any new design should consider the following five objectives:

■ We in the northern G7 countries must reduce our material throughput by 80 percent in the next 40 to 50 years, and we need to create a commercial model that countries all over the world can recreate. We have given developing countries the boot strap with no boot attached, because the resources simply are not available for them to consume as much as we do.

■ We have to reinvent the commercial system in a way that increases the scope and meaning of jobs. We cannot say cut back on this or that unless we simultaneously increase the quantity and quality of employment in this country. Otherwise, we are just trading one set of problems for another.

■ We cannot base our vision of sustainable development on guilt, moral principles, values and mandates, because everyone's moral compass is different.

■ We must imagine a world much more interesting than the one we are in today. Living sustainably must be something everyone (all 5.5 billion people) wants to get up and do everyday, voluntarily, because we want to, not out of guilt.

This is a very exiting time to live. In the next several decades, we will reinvent everything around us. — *Paul Hawken*

The big lie behind sustainable development is that sustainability is not enough, and there really is no such thing. It is not the zero-sum game it is made out to be. We will either restore the environment or degrade it. We do not want to, and cannot, sustain it as it is. Restoration must be the motto of the day.

If we want businesses to behave differently, we need to send them the right economic signals. — *Paul Hawken*

The design template for a new commercial system is all around us, in nature itself. The natural world operates on three simple principles. First, there is no waste. What is waste for one organism or system is food for another. There are no sinks or landfills. Second, nature runs off current energy income provided by the sun. It does not burn up carbon from the cretaceous period in order to operate. What makes the first two principles possible is that nature is amazingly diverse. A diverse economic system allows companies to establish symbiotic relationships with one another so that groups of industries can form zero-emission, closed-loop coalitions.

To help the commercial system begin to mirror nature's efficiency, two scientists in Germany have devised what they call an "intelligent product system" where all products are divided into one of three categories:

■ *Consumables:* Things we actually use up or can throw away with confidence that they will break down into dirt with no persistent effects. While we call ourselves consumers, we actually consume very little. Most of our products simply pass through the system once and end up as waste.

■ *Products of service:* These are products we do not necessarily want to own but instead want the service they provide (for example, refrigerators, TVs, VCRs and automobiles). We would only lease these from the manufacturer until we did not want them any more or until the product had reached the end of its useful life. We would then return the item to its maker, who would remanufacture its parts into new products. Companies would begin to take greater notice of what goes into their products since they would eventually have to take them back. This is already happening in Germany (for example, BMW) and is causing manufacturers and suppliers to redesign their products so they can be returned and recycled in 20 years. This would move us toward a landfill-less society.

■ *Unsalables:* These would be substances that persist in the environment (heavy metals, toxics and so forth.). Companies would still be free to produce them, but as with durable goods, they would own these substances for life. Companies would mark them with their own molecular code so that if I had my well tested and found PCBs from company X, I could call and say, "There is something in my well that belongs to you. Could you come and get it?" Companies would likely find it less and less desirable to produce such compounds and would turn their energies toward other products.

As we strive to create a sustainable society and culture seven generations from now, it is instructive to remind ourselves that Thomas Jefferson designed our Constitution with the seventh generation in mind and that we are that generation. I believe the changes toward restoration and sustainability are inevitable. We are in an age of reformation, and while there will be no Martin Luther to knock on our door, the trends are in place. It is happening right now. The question is not whether it will happen but when and how. This is a very exciting time to live. In the next several decades, we will reinvent everything around us.

PUBLIC REACTION TO TEAM REPORTS

In the congress' first set of workshops, participants voiced their opinions on the Initiative's seven team reports on settlement, manufacturing, agriculture, energy, forestry, minerals and recreation. Congress participants could attend briefings on two teams. Following a short introduction to a team's main findings and recommendations, attendees worked in small groups to discuss the report and what they heard. Because each team report contains a great deal of information, people's reactions were necessarily limited by what they could absorb in a small amount of time, how much of the report they read ahead of time, and their current knowledge about the subject. The arrangement here of participants' comments generally follows the format of the actual team reports, going from vision, issues and principles to goals and strategies.

This is a collection of reactions from individual workshop participants and not the product of any group consensus. Because the comments sometimes contradict one another — reflecting the workshops' diversity of opinion — they are best understood in the context of the seven team reports. Readers should refer to *Redefining Progress: Working Toward a Sustainable Future* to see the seven reports and their respective visions, principles, issues and strategies. The thoughts expressed do not necessarily represent those of the Minnesota Sustainable Development Initiative or its team members. The word *group* is used only in the interests of brevity and not because all workshop participants held the same opinions on a given point.

SETTLEMENT

Vision

The group supported striving for communities that offer a sense of belonging and are home to businesses employing highly skilled

workers. They liked the idea of planning for the welfare of future generations and acknowledging current environmental problems. In general, participants approved of the team's vision, but some expressed concern that it may not be realistic.

Participants wanted more attention paid to aesthetics and the influence of environmental factors, both natural and synthetic, on citizens' sense of place. Some felt the report should broaden its perspective to include stakeholders outside Minnesota and should underscore the need for individuals to be responsible stewards over their property (as opposed to relinquishing some property rights). The group saw the relationship between meaningful employment opportunities and settlement patterns as particularly relevant for areas of Minnesota outside the Twin Cities.

Some felt the vision's approach to the environment was too negative and mechanistic. Others suggested describing the ideal community as a more natural system based on closed cycles of resource use and regeneration. Still others felt the vision should emphasize the importance of learning about environmental stewardship through exposure to natural systems.

Principles

In general, participants believed the principles were on target. The group particularly noted the importance of making decisions based on sound information, reducing Minnesotans' consumption levels, protecting vulnerable lands and natural resources, rewarding risk-taking and moving toward full-cost pricing.

Yet participants saw the need for cross-evaluations among the seven Initiative teams to check for consistency in policies and principles. The group also felt it is important to

specifically address the problems of inner cities and why there is flight from these areas. Some felt issues of social, economic and biological diversity were not adequately addressed and ought to be reflected in an additional principle.

Other major discussion themes included providing incentives for efficient use of existing infrastructure, educating the public about sustainable development principles and benefits, and the need to understand which factors motivate people to move from urban to rural settings.

The group also suggested defining full-cost pricing based on regional information, making political subdivisions into larger, more effective units and explicitly adding the concept of intergenerational equity (that is, saving resources for future generations). Child care and equitable distribution of funds to women and minorities were also noted as issues related to a stable, sustainable society. Some participants proposed linking environmental, economic and social principles more closely. Finally, there was a concern that the team had focused too much on metropolitan areas and yet, within those areas, not enough on inner-city problems.

Issues

While the group felt many of the issues were well defined, it wanted more of a local government perspective. Participants were divided over the desirable degree of government control, with some wanting more emphasis on incentives rather than mandates and others wanting state and regional development frameworks with "teeth." Participants saw the need for more trust between levels of government but wanted some mechanism for public accountability as well. The group suggested that the state should provide a sustainable development framework with agreed-upon outcomes and then let local government decide how to achieve them. Many argued that com-

munities need financial incentives and technical help to move toward sustainability. The group recognized that to achieve sustainability, different levels of government need to work as partners.

Goals and Strategies

Participants welcomed the team's emphasis on education but felt settlement and transportation planning should place more emphasis on the needs of pedestrians. There was support for moving toward full-cost pricing by developing methods for measuring externalities (such costs as pollution, which are external to economic transactions and thus unaccounted for) but some disagreement about requiring versus promoting sustainable practices. Some felt mandates were justified, while others believed incentives would be the most effective.

Participants liked the team's focus on regional strategies, cluster development, controlling urban sprawl and linking a comprehensive plan to local assessments of sustainability. The group also favored household sustainability assessments and policies to ensure that all people do not have to move to urban centers.

There was a call to include performance standards and guidance on model sustainable ordinances, to refocus existing programs (such as metropolitan urban services area designation) and to encourage prominent business leaders to support sustainability. Consolidating and streamlining government by sharing resources was also a topic of discussion. The group acknowledged the need for better ways of determining direct and indirect development costs.

The group also wanted more discussion on making revitalized neighborhoods more attractive than suburbs, changing political boundaries to reflect communities and promoting a stronger sense of community in suburban areas through neighborhood stores to which residents could walk.

Some participants felt too little was said about population control and family planning. They advocated educating others about the links between unprecedented world population growth and per capita resource use, and the inherent unsustainability of these trends. Others felt it important to define the terms *community* and *sustainable community* and identify their implications for food production and distribution, sewage treatment and land use. Acknowledging that Minnesota cannot build immigration barriers, the group posed the question of how many people the land will support.

Finally, the group identified the workshop's four best ideas: 1) developing state and regional planning frameworks with teeth; 2) providing open access to comprehensive, usable information and analysis for decision makers at all levels; 3) forcing development to pay its own way by implementing full-cost pricing in settlement decisions; and 4) improving energy efficiency throughout Minnesota's built environment (such as through cluster development).

MANUFACTURING

Vision

While participants overall liked the team's vision, some wanted greater clarity about the meaning of "safe" manufacturing. Others wanted to integrate the idea of restoring natural resources into the existing vision.

Participants also had some open questions:

- How can individual businesses, industries or even the state as a whole achieve full-cost pricing — where the prices we pay for products reflect the total social and environmental costs of producing them — within a competitive market without losing business to others?
- How do we balance full-cost pricing with concerns about social equity (the ability of lower-income citizens to pay higher prices)?

- Are *preservation* and *sustainability* contradictory terms?

The group emphasized the importance of businesses making a profit. Manufacturing that cannot turn a profit is not sustainable. Participants agreed that consumers should have access to complete and accurate information about the impacts of the products they buy and that Minnesota's relationships to other states and nations must be considered in making policy decisions. The group liked the idea that Minnesota would lead the nation in sustainable manufacturing.

Principles

While acknowledging that the manufacturing team's report implies a pollution-prevention approach, there was some concern that it does not specifically mention it. Some participants wanted to see the principles clearly state a preference for using recycled materials in packaging and products.

Other concrete suggestions for improving the principles included:

- Using advertising and marketing to educate consumers about the environmental characteristics of the product and its impacts;
- Encouraging manufacturing enterprises that have a net positive impact (environmentally, socially and economically); and
- Adding a principle on product durability that states how long, on average, before a given product's life cycle ends.

Some thought it would be useful to create a cyclical manufacturing diagram so that people could visually understand how the commercial system needs to mirror the efficient production cycles operating in nature.

As with the discussion about the manufacturing team's vision statement, there was a question of whether or not full-cost pricing is realistic. In response, some suggested that prod-

uct stewardship, where companies take responsibility for the entire life cycle of their products, would be a step toward rolling all true costs into product prices.

Issues

Workshop participants felt the team had done well in identifying the lack of education, for both manufacturers and consumers, as a main barrier to sustainable development. The group also found the report's definition of public policy problems particularly insightful.

Still, some suggested the need to further differentiate between small and large businesses, given the often great disparity between them with respect to investments in education and in research and development. There was general support for eliminating government subsidies for activities that are not sustainable and for placing greater emphasis on developing new, environmentally sustainable technologies.

Goals and Strategies

The group wanted to add environmentalists, communities and individual businesses committed to sustainable development principles to the list of potential alliance partners. They also wanted to include an umbrella statement that all stakeholders in Minnesota should abide by sustainable development principles.

There was general support for devoting public dollars to provide incentives for sustainable development research and development and to catalyze new research and development partnerships. The group also felt full public participation would be vital in establishing these new alliances and supporting fundamental changes in tax and regulatory policy. Some would like to see Minnesota create a tax and regulatory climate that would be good for sustainable manufacturing.

Participants felt that information about the limits of the resource base should be included in any set of sustainable development indicators. They agreed that manufacturers should set priorities for products and investments based on sustainable development criteria and think in terms of producing sustainable products. Some wanted more discussion of sustainable manufacturing facilities in rural areas. Others advocated consistent and consolidated systems to measure resource use and waste generation by the Pollution Control Agency, the departments of Natural Resources, Transportation and Public Service and other state agencies.

AGRICULTURE

Vision

Maintaining vigorous rural communities in which young people could and would want to stay was an appealing aspect of the team's vision statement. Participants supported a holistic approach to agriculture that considers farms as profitable but responsible parts of larger natural systems. While the group liked the idea of leaving a legacy of sound stewardship to future generations, there was some concern that too little has been said about farming safety and consumer responsibility. Participants felt it was important to acknowledge the role that the year-round demand for high-quality food has on agricultural practices.

There was also support for explicitly placing a high value on agriculture, promoting better education about food production processes and defusing misunderstandings about sustainable agriculture. Recycling, efficient use of resources and more discussion about the definition and desirability of sustainable agriculture were other key topics. The group wanted more emphasis on public-private partnerships and more elaboration on the decision-making structure that could be used to determine which practices are and are not sustainable.

Principles

There was particular support for several of the agriculture team's principles, including the idea that agriculture should not only be financially viable but also rewarding as a way of life, that it must be environmentally sound and fair to all involved. Addressing nonpoint source pollution and educating stakeholders about all aspects of farming also were major topics of discussion.

There was some disagreement about having community needs drive research and education efforts on sustainable agriculture. Some felt that focusing so heavily on community-based agriculture would be protectionist, while others believed it would be essential to maintain rural livelihoods. The group wanted more discussion about the loss of agricultural land to other uses and the inherent limitations of the environment. Some participants wanted greater clarity about what it would mean for agriculture to "fit with the social fabric of the community" and more details on exactly how agriculture should "nurture wildlife." Finally, the group suggested a principle on incorporating all environmental and health costs into the prices consumers pay for food.

Goals and Strategies

There was general support for the team's emphasis on systemic, structural issues. Some participants supported greater flexibility and expanded options for producers in meeting environmental regulations. The group favored broader participation in decision making, funding urban-rural dialogues in many forms and establishing sustainable agriculture incentives, such as tax credits for preserving natural areas. Research on the use of renewable resources and innovative growth management that keeps agricultural land near cities productive also enjoyed general support.

Again, the group felt the agriculture report did not say enough about how consumer behav-

ior shapes what happens (that is, how what consumers eat relates to what and how farmers grow). Other concerns included the state's appropriate role (how Minnesota's policies fit with the national agricultural system), the need for diversity in decision making (making sure that local producers, women, clergy, ethnic and religious groups, and small town merchants all have a chance to participate) and the need to develop measurable indicators for responsible stewardship.

The group wanted more emphasis on providing incentives for firms to adopt sustainable practices, rewarding them for internalizing the full costs of production. Some were concerned that other types of land use, such as wetlands, had been ignored or undervalued. There was also some disagreement over the wisdom of offering tax credits for "end of pipe" pollution control and abatement equipment. One school of thought saw these tax credits as enhancing regulatory flexibility, while another argued that encouraging pollution control works against sustainability by rewarding remediation rather than prevention. Some also questioned whether high-yield farming could be compatible with long-term sustainability, profitability and a good quality of life.

Participants also wanted to see more discussion of biotechnology's role in agriculture, the impact of corporate farm laws on production flexibility and the implications a model sustainable farming enterprise would have for mainstream agriculture.

ENERGY

Vision

Participants particularly liked that the vision included accounting for the full social and environmental costs of energy production and use. There was also general support for the vision's emphasis on eventually meeting Minnesota's energy needs by "using only the amount of energy that can be renewed on a

sustained basis.” Yet some wanted more discussion of the state’s goals concerning greenhouse gas emissions, climate change and toxic substances (such as mercury).

Participants advocated promoting lower energy use per capita and argued that energy consumption per capita will have to decline as part of a concerted conservation effort. The group wanted to see a more explicit statement about moving away from fossil fuels and about valuing the depletion of finite energy resources as an externality (a real cost not accounted for in market transactions).

Principles

There was general support for principles on minimizing transportation needs and energy use and on ensuring that the costs of government regulation do not exceed its benefits. Although participants agreed that the principles were quite comprehensive, some wanted more explanation about such objectives as improving lifestyle options and promoting “alternative human interaction,” referring to telecommuting and teleconferences as ways to avoid the need for physical transportation. The group also expressed some concern that the energy team’s report neither clearly sets out the case for sustainable development nor adequately represents all stakeholders.

Issues and Strategies

The discussion on energy issues and strategies focused on the need to investigate further Minnesota’s indigenous resources (primarily wind and biomass), along with other clean energy sources, such as hydrogen and photovoltaic cells, which translate sunlight directly into electricity. The group also advocated revising Minnesota’s tax system to provide appropriate incentives and disincentives for energy production and use. For example, taxing people’s consumption rather than their income and instituting emission-based taxes (such as a carbon tax).

Another main theme was improving mass transit options and availability. This would include enhancing the existing transportation system and exploring entirely new forms of mass transit. The group discussed multimodal transit as a possible goal, where travelers can switch seamlessly from one mode of transportation to another. Some suggested changing Minnesota’s constitution to allow designating a portion of the state’s gas tax revenues to fund mass transit and other forms of transportation.

Because Minnesota has no fossil fuel reserves, the group felt it important to factor the price volatility of fossil fuels into long-term energy decisions. Uncertainty about foreign energy sources and prices not only underscores the need to assign value to depletion of those sources but also suggests that fossil fuels may not be the “least cost” option.

The group suggested that transportation is so central to Minnesotans’ way of life that the Initiative should establish a distinct working group on transportation issues.

FORESTRY

Vision

Though the group felt that the team’s vision statement gave them a common frame of reference, some expressed a concern that it did not say enough about the quality of Minnesota’s wood resources. Others wondered how Minnesota can have a strong and diverse forest products industry and strong recreation industry in the face of a growing world demand for forest products. There was also a concern that the vision does not explicitly state that the presence of forests is essential to the overall health of the land. Some participants felt that the vision statement should more fully address the role of public involvement in forest resource decisions and should speak to all who use the forest. Finally, the group suggested that the vision does not convey how difficult achieving fundamental change in forest management will be.

Principles

Participants seemed to support the forestry report's emphasis on avoiding policies and actions that might cause irreversible outcomes. They also welcomed the principles of maintaining biological diversity, considering the social impacts of all forest uses and making efficient resource use a priority.

Some felt, however, that the report did not explicitly address the possibility of eventually losing old-growth forests altogether. Questions were raised about whether biodiversity can actually be managed and whether sustainable development can be achieved without population control.

Others felt the report should have given more consideration to the relationship between forests and spirituality, aesthetic values and humans' connection with the earth. Some wanted specific sustainability guidelines on forest products, while others wanted forestry issues related to other sectors, such as recreation.

Other suggestions for improving the report include giving more attention to attitudes about society's demand for forest products and integrating sustainable forest and natural resource management into existing education curricula rather than reinventing the educational system.

Issues

Participants liked the report's emphasis on maintaining an economically viable forestry sector and felt the team did a good job of summarizing the vast amount of information it had from Minnesota's groundbreaking generic environmental impact statement on forest management.

Participants suggested further study of tree growth laws, tax incentives and other market-based approaches aimed at getting public and private landowners to manage their lands

sustainably. Concerns were raised that rural stakeholders be fairly represented in forest management decisions. Others felt that more attention should be paid to the value of maintaining functioning forest ecosystems. Finally, some wondered where new timber will come from with the decline in national forest harvesting and would like to see the role of consumer demand for timber and timber products examined in more detail.

Goals and Strategies

Participants liked the idea of establishing a forest resources assessment and evaluation program to track how Minnesota is managing its forests, though they acknowledged that this would be an enormous task. The state has completed the first step toward such a program with its generic environmental impact statement on forestry.

Echoing their earlier sentiments about which issues were most important to sustaining forestry, participants especially liked the forestry report's recommended strategies on maintaining or improving economic viability and providing incentives to extend the timber resource base.

Some felt that the report left out some important strategies proposed in the state's generic environmental impact statement. Others wanted more details about how Minnesota should fund and carry out research on sustainably managing its forests. Some also wanted a simpler description of what Minnesotans need from their forests, what their goals are and how they can achieve them.

Participants expressed a need to establish a mechanism for involving local interests (county government, private organizations and community groups) in forest management decisions. Some felt that county government, in particular, may have the best idea of what is or is not locally sustainable.

MINERALS

Participants in the minerals team feedback session had the following questions and comments:

- How are the strategies in the report going to be implemented?
- What are the environmental impacts of a direct-reduced iron facility? The team's recommendation is to encourage this value-added processing, yet Minnesota does not have access to the data necessary to evaluate and permit such a facility.
- Minnesota needs to set state-level priorities for the county geologic atlas program since scarce financial resources will inevitably limit the program's coverage.
- The minerals report underplays the need for environmental stewardship; the environmental message is "soft."

RECREATION

Vision

Participants liked the broad, encompassing nature of the team's vision and supported establishing more public-private community partnerships to develop common goals and pool resources. Having the vision's key terms explicitly defined was also appreciated.

Still, there was some confusion about the definition of future generations. Does it refer only to Minnesotans, or does it include visitors to the state? Some felt the report said too little about economic development driven by sound environmental management. Others noted that there was no mention of physical carrying capacity or the difficulties of quantifying that. There was a call for more discussion on the private sector's role and a greater emphasis on resource preservation.

Principles

Some participants wanted the report to include legislative principles in the form of specific mandates, policies and guidelines, and some suggested that the state may need to limit access to certain lands and waters. The group again suggested a greater emphasis on resource preservation and on the private sector's roles and responsibilities in maintaining recreational opportunities. The importance of acknowledging that humans are part of natural ecosystems also was discussed.

The group noted that the report's principles do not specifically address the need for environmental education or physical and geographical accessibility to recreation sites. There was also concern that the term wise use has negative connotations for some and should be avoided if it could cause confusion.

Issues

Participants liked the report's call for greater public participation in policy decisions and felt the inadequate enforcement of existing laws, regulations and contracts was well expressed as a key issue in the report.

The group called for evaluation standards that could be applied to help determine acceptable levels of degradation and for some discussion of how to handle the ever larger, faster and noisier recreation equipment people use. Some pointed out that government incentives, such as timber sales that open roads and access points, can have positive effects for recreation.

Again, the group wanted some acknowledgement that recreational sites have limited carrying capacities. There was also a call to explain and address the "willingness to pay" concept and to clarify the meaning of full-cost pricing as it relates to recreation issues.

Goals and Strategies

There was general support for the report's handling of noise issues and for building greater public involvement and consensus. The group, however, wanted more discussion of how to finance broad access to the full range of recreation sites and felt the report's strategies concerning "who pays" were incomplete. They also called for more emphasis on the private sector's roles and responsibilities, and the benefits of contributing to recreational services. The team's public education strategy and its call for an accurate, comprehensive resource inventorying and monitoring system also were well received.

The group suggested illustrating specific points with examples whenever possible. They also would like to add proposals for private-sector incentives and some discussion of overlooked public-private recreation opportunities. Some would have liked the strategies overall to be more specific. There was a call to make

individuals pay the full costs of their actions, such as for search and rescue efforts.

The lack of business representation on the recreation team was noted. There was some concern that the team had a disproportionate number of public agency members (four of 15) and that the public sector seems to monopolize the recreation industry. Some suggested that as a first step, parties should work to improve communication among private and public outdoor recreation providers and reevaluate the heavy reliance on public agencies and public solutions.

There was some disagreement within the group whether recreation issues should be completely integrated into the work of other teams. Some suggested that recreation must become a part of a mandated regional environmental review process. Others felt it should remain a distinct subject so important issues are not overlooked.

PARTICIPANT ADVICE TO THE INITIATIVE

This section offers a representative sample of the advice congress participants gave to the Minnesota Sustainable Development Initiative on its next steps and priorities. Some of this advice comes directly from the congress' second day of workshops, in which participants were asked to identify the best ideas they heard during the congress; other advice comes from congress evaluation sheets and a registration questionnaire.

What follows is a collection of opinions and reactions from individual workshop participants and not the product of any group consensus. These comments and this report are not meant to stand alone but rather should be viewed in light of the team reports. The advice reported below does not necessarily represent the views of the Minnesota Sustainable Development Initiative team members.

Feedback from congress participants suggests that the EQB and the state ought to focus their efforts and resources on the six strategic areas outlined in the Initiative report's opening chapter, "Setting a Course": 1) education, 2) incentives and disincentives, 3) accounting of costs and benefits, 4) knowledge gaps and information management, 5) land and natural resource use, and 6) the roles of government, the private sector and citizens.

EDUCATION

■ *The EQB should hold discussion roundtables with the media.* These could range from editorial board meetings to special forums where both reporters and editors could gain an understanding of sustainable development's implications. These would bring them up to speed and help them see news stories through the lens of sustainability.

■ *The media should play a greater role in publicizing Minnesota's sustainable develop-*

ment successes. They could also play a constructive role in exposing those who obstruct progress on sustainable development.

■ *The Minnesota Sustainable Development Initiative needs to develop better media relations in general.*

■ *Develop a video to encourage discussion of sustainable development.*

■ *Conduct presentations and roundtable discussions with business groups, local governments and citizen groups (at least one per county).* Enlist help from representatives of these groups in organizing the events and building a network of supporters for sustainable development.

■ *Get sustainable development on the agenda of the Minnesota League of Cities annual conference and other associations' meetings.*

■ *Educate, educate, educate.* Work with educational institutions and other state and local agencies to establish programs that teach sustainable development concepts and principles to all segments of society. Find creative ways to reach out to a wide range of citizens through displays at shopping malls and so forth.

■ *Help stabilize funding for environmental education.*

■ *Develop and publicize a long list of concrete examples of sustainable development in practice, including public, private and volunteer-based actions.*

■ *Promote greater public awareness of the Environmental Quality Board and its purpose.*

■ *Publish a bimonthly newsletter on environmental change and sustainable development.*

■ *Invite the Minnesota Environmental Education Advisory Board to report annually to the Environmental Quality Board on the state's efforts to educate its citizens about sustainable development.*

■ *The EQB should act as the primary educator and coordinator of sustainable development throughout the state.*

INCENTIVES AND DISINCENTIVES AND ACCOUNTING FOR COSTS AND BENEFITS

■ *Look at existing incentives and disincentives at local, state, federal and global levels. Then catalogue, analyze and reorient these incentives (such as property taxes, sales taxes, commodity programs) to achieve sustainable development goals.*

■ *Provide state incentives for communities to develop their own comprehensive sustainable development plans.*

■ *Tie state employee job descriptions and performance appraisals to sustainable development principles and criteria.*

■ *Redirect state investment by eliminating the state sales tax on new purchases of capital equipment by "green" industries.*

■ *Define full-cost accounting and conduct research on how to do it. Require planning at all levels of government to include environmental and other external costs.*

■ *Reward industry and business for pollution prevention activities.*

■ *Provide consumers with more information about the impacts of products.*

■ *Sponsor design competitions for sustainable innovations.*

FILLING KNOWLEDGE GAPS AND MANAGING INFORMATION

■ *Set up a sustainable development computer bulletin board to encourage public involvement.*

■ *Establish a framework for collecting data, monitoring progress toward sustainable development and evaluating the state's development objectives and goals.*

■ *Develop an inventory of social, economic and environmental sustainability indicators and periodically communicate the state's progress. Such indicators would help Minnesota determine whether it is moving in the right direction. State government should establish a vehicle for regularly communicating the state's progress toward sustainable development, such as an annual "state of sustainability" address.*

■ *Quantify externalities and build consensus on how to integrate these costs into the price of goods and services. Let the market be the main engine driving Minnesota's moves toward sustainable development.*

■ *Evaluate the goals of Minnesota Milestones, the state's 30-year plan, in the context of sustainable development. Devise specific strategies to achieve those goals.*

LAND AND NATURAL RESOURCE USE

■ *Identify and evaluate the impacts of population growth, population redistribution, and per capita energy and resource consumption on the natural resource base.*

■ *Coordinate governmental activities, laws and ordinances based on sustainable principles. Ensure that county and local governments do not receive conflicting signals and information from the state.*

- *Encourage value-added development of natural resources.* Use sustainable, value-added manufacturing as a way to revive rural areas.
- *Institute a watershed- and ecosystem-based framework for development.*
- *Continuously provide timely, credible, up-to-date scientific information to the public and decision-makers.* This could mean new data systems, as well as collating and transferring available information into a single user-friendly source.
- *Provide formal education and training in sustainable development for policy-makers.* Urge communities to make sustainable development education mandatory for community land use planners. Create a code of sustainable development ethics for elected officials.

THE ROLES OF GOVERNMENT, THE PRIVATE SECTOR AND CITIZENS

- *The state should require all population centers to develop local land use plans, including an urban growth boundary.* The state should: 1) set guiding principles; 2) provide technical assistance and other incentives to local areas; and 3) report on the state's overall progress.
- *Create interagency teams to make the state a model.* These teams could begin to address the interrelationships among the Initiative subject areas of agriculture, energy, forestry, manufacturing, minerals, recreation and settlement.
- *Develop specific legislative proposals to begin implementing sustainable development.* This effort could start by amending Minnesota's constitution to allow use of the gas tax for mass transit, telecommuting, and so forth, instead of just highways.

- *Present Redefining Progress: Working Toward a Sustainable Future to the Legislature as a tool for evaluating policy proposals.*
- *Get the Governor to actively support sustainable development as a state goal.* Leadership from the top could focus the attention of business, media, the public and especially local community leaders on the need for sustainable development.
- *Identify Initiative recommendations that the Governor could implement via executive order.* Garner the Governor's support for making the state a model sustainable enterprise.
- *Develop a comprehensive land use planning framework.* The state's role would be to provide communities with guidelines developed through grassroots input.
- *Have state agencies provide local decision-makers with more usable information.* It should be collated and easily obtainable.
- *Redistrict the state according to watershed lines,* replacing county lines for purposes of political representation.
- *Screen all government decisions based on principles of sustainable development.* Provide a comprehensive sustainable development framework within which state agencies would operate.
- *Environmental Quality Board members should lead the rest of the state by developing their own sustainable development strategy.* Leading by example, EQB members could help all state agencies implement sustainable development practices. As part of this process, the board could look at state laws and regulations that are barriers to sustainable development.
- *Select and pursue a few doable strategies that have broad support.* This would show concrete action and thereby build momentum for the Initiative's next phases.

PHASE TWO OF THE INITIATIVE

- *The EQB should establish a coordinating committee with work groups assigned specific tasks or goals to advise the board on sustainable development issues.*
- *Hold local and regional "discussion and input sessions" on sustainable development.* These would give people a chance to address the areas most affecting their communities and educate officials and the public on why sustainable development is essential.
- *Establish a business roundtable on sustainable development.*
- *Provide the EQB with an advisory task force and permanent staff devoted to sustainable development.* This would allow the board to keep the concept of sustainable development alive, spread the word throughout the state and receive input from citizens.
- *Add representatives from the Department of Trade and Economic Development and the Metropolitan Council to the EQB.* These additions would ensure a more holistic approach to planning and would formally link economic and environmental policy-making.
- *Coordinate with other efforts.* The Initiative could provide a framework within which such efforts as the generic environmental impact statement on timber harvesting and the board's environmental indicators project could be included. The EQB should identify efforts in government, the private sector and academia with which to collaborate on setting concrete, achievable goals that will collectively move Minnesota toward sustainable development.
- *Foster strategic alliances among agencies, the Legislature and business, environmental and citizens groups.* Focus on building trust among urban, suburban and rural governmental units.
- *Promote better communication and coordination between state agencies and between state, county and federal agencies and the private sector.*
- *Bring new people into the process.* Bring together leaders from chambers of commerce, business, labor, environmental, neighborhood and community organizations to discuss sustainable development issues, goals and strategies. Include more citizens of diverse ethnic, religious and cultural backgrounds.
- *Fund a pilot sustainable community program.* Give two or three communities the means to implement sustainable development plans. This would be more efficient than spreading scarce resources throughout the state.
- *Encourage local population centers and communities in the metropolitan area to establish permanent growth expansion limits.*
- *Promote sustainable development initiatives in counties and cities.* Solicit state appropriations, grants and donations to support forums on sustainable development around the state.
- *Incorporate population growth and resource use per person as critical issues in making sustainable development decisions.*
- *Put a development surcharge on all new residential construction in the state.*
- *Put a carbon tax on fuel usage.* The revenue could fund low-interest or no-interest loans to reduce energy usage in factories, stores and homes.
- *Put a congestion fee on car registration in the metropolitan area.*
- *Put a value on free parking in urban areas and make it count as income on state income tax.*

■ *Ban the use of lawn herbicides and insecticides in urban areas.*

■ *Sponsor public debates on "green taxes."*
These debates would focus on shifting taxes away from activities the state would like to encourage, such as investments in efficiency, and toward activities it would like to discourage, such as waste and pollution.

■ *Use money from the state lottery to fund sustainable development.*

■ *The Environmental Quality Board should improve communication and coordination among stakeholders, strengthen its authority over state agencies and oversee the state's implementation of sustainable development, delegating to state agencies responsibility for carrying out the Minnesota Sustainable Development Initiative's top priorities.*

■ *Convene a discussion by experts to explain more clearly how all aspects of Minnesota's economic climate, including its poverty level, relate to environmental degradation or improvement.*

NEXT STEPS FOR THE INITIATIVE

In the wake of the congress, the Environmental Quality Board will collaborate with other public and private interests to achieve the following major objectives:

- Develop and introduce a legislative package of key policy changes drawn from the Initiative (July 1994 to May 1995).
- Make state government a model sustainable enterprise through executive and legislative actions establishing sustainable development as a formal state policy (ongoing).
- Develop a six-year strategic plan for sustainable development that includes an agenda for implementing and institutionalizing the Initiative's recommendations (July 1994 to June 1995).
- Establish a coalition for sustainable development to guide the Minnesota Sustainable Development Initiative on the actions the state should take to achieve sustainable development (1995).
- Collaborate with legislators and environmental, civic, business, educational and religious leaders to achieve the above goals (ongoing).

A FINAL NOTE

Meeting this ambitious list of objectives will require broad support and commitment from countless groups and individuals. The Min-

nesota Sustainable Development Initiative was launched by government, but the responsibility for achieving a sustainable society rests largely with the people who live in this state.

Although Minnesota has traditionally been a national leader in environmental quality and has developed a strong manufacturing sector, it has — like other states and nations — treated economic, environmental and social issues separately. Without a more integrated approach aimed at sustainability, problems ranging from child poverty and crime to rural population losses and high energy use will only worsen.

Our challenge in the coming decades is to change the rules so our businesses and institutions can flourish by maintaining and restoring our natural environment and communities.

If the Minnesota Sustainable Development Initiative is any indication, this challenge will be met only if every Minnesotan takes part in discussions about the future of their own communities and the state as a whole.

This report on Minnesota's first congress on sustainable development is meant to continue and encourage these discussions. What do Minnesotans want to preserve and sustain? How do they want to use this state's natural resources? And what sort of communities would they like to live in and pass along to the next generation?