Sustainable development: Growth without losing ground

By Derek Doyle

TWENTY years ago, we heard many definitions of the word "environment." Attendees at conferences and workshops argued over their definitions. You were not part of the movement unless you had one of your own. In time, however, we accepted one another's definitions, molded them into a common understanding, and built a common vision.

So it is with sustainable development. Sustainable development refers to development that meets the present needs without compromising the ability of future generations to meet their needs. John Ruskin, in talking about the future of England in the late 1800s, said, "We have no right to involve them [future generations] in any unnecessary penalties or deprive them of a benefit that was in our power to bequeath." This old idea rounds out the understanding of sustainable development with the concept of passing on benefits to future generations. Ruskin's view was echoed by Emil Salim from Indonesia at a recent conference on environment and economy. Salim contended that economic analyses should be transgenerational because our decisions must reflect respect for generations unborn.

As travellers, our decision-making should meet our needs and protect the long-term integrity of the trail. Because we are walking a trail, a trail that must be used by others, we must leave the trail a little better than we found it—sideslope-stabilized, bridge-improved, or tree-protected. Our mark on the trail must be light and positive if the trail is to sustain the passage of future generations. The most important benefits of our passage need not be those that accrue to us. Indeed, our greatest satisfaction may come from the benefits we bequeath to those who come after.

Lessons from the past

Care for the land, strong urban and rural connections, transgenerational thinking, a vibrant democracy, and an ethical or spiritual relationship with our environment are key lessons from history. "A nation that does not know history" said George Santayana, "is fated to repeat it."

Sustainable development can unleash forces that will rejuvenate our democracies. In the absence of a flourishing democracy, special interests prevail and decision-making is short-term. Understanding of the relationship between man and the land, feeling the spiritual value of all resources, and nurturing public participation can lead to decisions that build strong coalitions and actions that proudly endure for generations.

The challenge of soil and water conservation is not a 20th century phenomenon. It was a challenge that even the earliest civilizations faced and failed to meet.

Babylonia. As early as 6,000 years ago, the Sumerians migrated into the fertile area between the Tigris and Euphrates Rivers and established what we generally consider to be the first major civilization. The first farmers in this valley developed agricultural-based city states, built irrigation systems, and achieved remarkable technical prowess.

Over several thousand years, the area changed hands many times as one tribe after another took over what some people choose to believe was the Garden of Eden.

As Babylon grew, its architectural, artistic, and engineering talents flourished. The great hanging gardens provided the first air conditioning known to man. As populations continued to grow, industry prospered and successive waves of inhabitants searched for new resources. They cut much timber, changing the natural forces of stream control. Herdsmen overtaxed the grasslands with their sheep and cattle. The affluence of the city drew it apart from the surrounding countryside. Hinterland management was abandoned. Eventually, overgrazing turned the arid grasslands to desert. Erosion was greatly aggravated. Irrigation ditches and canals were not maintained. Canals plugged with silt. The land was abandoned. So died the City of Babylon.

The Valley of the Jordan, once blanketed with olives and cedars, is eroded to bedrock and heavily silted. It is interesting to note

Derek Doyle, former assistant deputy minister, Manitoba Natural Resources, is director of the Environmental Assessment Branch, Ontario Ministry of Environment, 250 Davisville Avenue, 5th Floor, Toronto, Ontario, M4S 1H2.

that some 3,000 years ago King Solomon entered into an agreement with Hiram, King of Tyre. The contract was to supply cedars of Lebanon for construction of the great temple in Jerusalem. Solomon committed 80,000 lumberjacks to the forests and a further 70,000 as skidders to move the timber to the sea. The forests are long gone.

China. People along the Yellow River of China have, for 4,000 years, diked the river for 400 miles across the delta to contain its flow. Rising populations and pressures on resources led to the deforestation of its highlands. Silt filled the river channel, which by the 1850s had risen 10 feet above the surrounding countryside. Disaster was inevitable. In 1852 the Yellow River broke out, killing millions, devastating the land, and entering the sea 400 miles north of its previous entry point.

North America. The Anasazi Indians, known as the "old ones," dwelled in Arizona, Utah, Colorado, and New Mexico for more than 1,300 years. Although these people did not initially develop pottery, their basket-making achieved such technological sophistication that water was boiled in the utensils. Their golden age, from 1100 to 1300 A.D., saw the establishment of great houses and cliff dwellings. Then, it all ended.

Our first impulse in looking back was to blame war and invasion. Yet there was no evidence of this, other than minor skirmishes. Investigators then turned to nature and major climatic change to account for the decline. A severe drought is thought to have occurred between 1276 and 1299. This would have resulted in crop failure, loss of game, and water shortages. One also wonders if the growing community lost its relationship with the land, resulting in the land's degradation. In either event these dwellings are left to the winds and imaginations of future generations.

On a recent vacation in California, I was impressed with newspaper articles noting that the issue was not whether surplus water from the north would be conveyed to the south. Rather, it was a question of how and at what cost.

In Arizona, every year twice as much water is pumped out of the ground as nature returns to it. Farmers are losing the fight for survival as water costs rise sharply.

The great Ogallala Aquifer provides water through 170,000 wells for 15 million acres of land that produces 15 percent of the nation's crops and 38 percent of the nation's livestock. About 24 million acre-feet are withdrawn annually, while nature replaces about 3 million. One study estimated that, by the year 2015, 30 percent of the region's agricultural production will be lost and along with it the livelihood of 300,000 people. Failure to preserve this resource is shortsighted and an error that future generations will find hard to forgive.

In Colorado a number of years ago, Governor Richard Lamb noted "the history of state water development was an eye-for-an-eye, tooth-for-a-tooth situation that left us all toothless and blind."

While a sun belt creates enormous demand for water, states in the Midwest are moving to prevent raids on the largest body of freshwater on earth, the Great Lakes. The Governor of Ohio, Richard Celeste, has commented, "I hope this region becomes known as the water belt of our nation, for we should have a substantial advantage if we are determined to seize it."

Care for the land by city and rural people, a spiritual relationship with our environment, and a commitment to the long term are but some of the lessons we can draw from the failures and successes of people everywhere.

Other lessons. Lessons should not be confined to disaster stories. Indeed, there is much evidence of the human capacity to manage and control our relationship with the land upon which we depend. Many people have devised ingenious regulatory and even religious means to manage the delicate balance necessary to sustain controlled development.

On a steep, rocky tract of some 2,000 acres, the community of Torbel in Switzerland, with a population of 530, has sustained itself for nearly 1,000 years. In the year 1517, villagers declared that "no man is permitted to set more cows to the alp than he can winter." This action linked the number of animals going to the community pasture to the owner's private landholdings and the amount of hay he could produce to feed the animals during the winter. Thus, no one could exploit the community pasture for personal gain without also incurring the necessary cost of winter feed.

Observations on how the land shapes society have led John Reader to observe that "though differing widely in their customs and beliefs, all societies represent solutions to the problems of staying alive and raising future generations. If they persist for centuries, it is because their solutions work."

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Major forces of change

There are many forces at work in the world that have a profound influence on the daily work of natural resource managers.

Arresting the growth of government. Foreign debt payments; military commitments; and rising health, education, and social service needs are but some of the pressures on public expenditures. Governments are meeting these pressures with deficit management, improved effectiveness largely, and by down-sizing of the public sector.

While this thinning-out force is at work, public sector managers are being called upon to meet the expectations of a much better educated community. Demands for leadership by government have seldom been louder, yet the commitment of resources is, of necessity, constrained.

We have seen substantial down-sizing in the private sector as well. AT&T not long ago cut 24,000 jobs, including 30 percent of its management group. Ford Motor Company reduced its salaried employees by 20 percent, and Warner-Lambert shed 33 percent of its work force, some 21,000 jobs. The down-sizing has been significant, and the results have been impressive.

In my agency, the engineering department has reduced staff by 32 percent, the land administration group by 23 percent, and the water resources staff by 21 percent. With technology, innovation, and a community service orientation, the loss in staff has been more than offset by gains in effectiveness.

The pressure to arrest the growth of government will continue. Down-sizing and program curtailment will be essential to meet the demands for new initiatives and to respond to the problems of tomorrow without growth in government.

Fragmentation of interest groups and the politicization of stakeholders. Today, many managers are faced with a proliferation of interest groups. No longer can one turn to an elected representative to speak for and

on behalf of his or her constituency. Rather, each interest group or individual wants to speak on its own behalf. People today are better educated than ever before; they understand the political system and recognize how powerful the media can be when used in support of their position.

New groups are emerging constantly. One can call a public information meeting on a subject and find a new association being born the same evening in the middle of the meeting.

Today, there are more than 12,000 environmental groups in North America with in excess of 10 million members. There are movements emerging on multiculturalism, native rights, fairplay for women, and many others.

The community is demanding participation directly in the resource management decision-making process. Groups seek a clear understanding of the programs that public sector agencies are delivering. They want to monitor these programs and ensure their effectiveness.

Further fragmentation of our society is occurring as local people seek recognition for their special regional needs that are frequently lost in the greater aggregations of our society. This fragmentation is radically changing the environment of the public sector manager and will profoundly influence the way public policy is developed, programs are managed, and resources are allocated.

Changing urban/rural relationship. Manitoba, a province of 1 million people, had 40 elected members in its legislature in 1899. This was made up of 36 rural legislators and four representing urban centers. The present legislature has 28 rural members and 29 urban members. The depopulation of rural areas is of concern to governments throughout the world.

A great many people living in urban centers grew up on the farm or were closely associated with farming through their families. This link, and with it an understanding of the needs of the countryside, is being eroded as each year adds another increment to the urban population. Urban populations will soon have lost their familiarity with the countryside and possibly with it their willingness to support many programs of interest to natural resource managers.

The problems of the world's cities are enormous, and there is a growing tendency for the cities to get a better shake than the country. The result could be that rural infrastructure deteriorates, capital investment declines, less is produced, new employment opportunities in rural areas fail to materialize, and people start to move off the land and out of small communities. Such a trend could prove disastrous.

More money is spent importing food because less food is produced. More energy is spent processing, transporting, and distributing food in the cities. More capital and energy are expended creating jobs. New employment in the cities requires major capital investment in contrast to the countryside, where land is the production machine used to generate employment.

China has been taking the lead in giving those who live in the countryside their due. Since the late 1950s, the government has been paying progressively higher prices for the grain it buys from farmers and charging less for the fertilizer, fuel, and feed that farmers need.

The challenge for resource managers is to improve living conditions, social services, employment, rural heritage, and productivity in the countryside. Resource managers also face the awesome challenge of bringing education to the urban population so that city dwellers will be sensitive to the needs of the countryside.

Internationalization of the economy. Daily we read about European and U.S. farm subsidies. We recognize how our agricultural economy in Canada cannot function without recognizing the impact of U.S. farm policy and European Economic Community measures. Our agricultural sector is very much tied to the international scene.

Canada's recent Free Trade Agreement with the United States is seen as a major opportunity by many of our entrepreneurs and industrial producers. We also witness, daily, opportunities in the 360-million-person European market as it moves toward full economic unity and a uniform currency.

In some quarters, we witness a reaction to this internationalization through growing protectionism as groups and industries seek tariffs and the development of nontariff barriers. One may be an efficient producer of pork, only to find that some element in the feed ration has been determined by another jurisdiction to be potentially injurious, resulting in the denial of access to that market. Decisions within another jurisdiction have major impacts on our economy, our programs, and the resources we manage. Information and the ability to anticipate change in such a dynamic world have never been greater.

Seeking the global approach. While these and other forces of fragmentation are gathering strength, public sector managers are being challenged to build a constituency of support for the programs they manage and demonstrate that their approach is global, comprehensive, and responsive to local needs. Examples of this developing global approach include The Bruntland Report, the Environment and Economy Task Force Report in Canada, the development of provincial and national Round Tables that are multisectorial, the formulation of provincial and national conservation strategies, and the integration of land and water management in river basin and watershed plans.

In Manitoba we are currently well advanced in the formulation of soil and water policies for the province. These have been forged with greater public input than any other public policy issue I can recall. They have involved the participation of all levels of government, academia, and business, ethnic, professional, and recreational associations—indeed, the full mosaic of Manitoba. This is but one example of a trend toward seeking global approaches to problem resolution, from farm to watershed, from county to country, from nation to globe.

A sampling of the issues

Many issues confront the resource manager today. The forces I have touched upon influence how these issues will be dealt with. Issues do not arise singlely, nor do they discreetly lend themselves easily to resolution. They come in groups. In touching on these issues, I would like to raise some of the ethical questions that must be faced:

Population. In 1986, world population reached five billion. There are three billion people entering their reproductive years, which will add to mounting pressure on the earth's soils, water, and other natural systems. If growth reaches two to four percent, sustainable development will be an impossibility. The planet will become a human anthill.

Indonesia, with a population of 178 million, is experiencing a two percent growth rate. That nation's goal is to have two children per family by the year 2040. The population will then be 360 million. A program of transmigration has been instituted. Inevitably, this means moving people to the outer islands where soil conditions are far poorer than on Java.

In Brazil, with a population of 150 million, 50 percent of the people live in subhuman conditions. The country has a $120-billion foreign debt. Exports, which in turn require more land clearing, are needed to service the debt. Growing and hungry populations are just making matters worse.

It is estimated that by 1995 there will be a need to spend $30 billion to slow population growth. Birth rates decline most rapidly in a society that enjoys economic and social gains. But how can this be achieved in a poverty stricken nation? Intensive education,

social pressure, and financial incentives are meeting with limited success. The more education women receive, the fewer children they choose to bear. Will the world's affluent societies see the need for and support massive transfers of money to the Third World? Can you support transfers when your own needs are far from satisfied?

Conservation. In 1952, the government of India made a commitment to retain 33 percent of its land in forest. Today, it is estimated that 11 percent remains forested. Globally, 75 million acres should be planted to meet the annual consumption of lumber, paper, and other wood products. Another 136 million acres should be planted to meet demand for fuelwood, and 247 million acres should be planted for watershed management and soil conservation. As resource managers, we must feel responsible for renewing our renewable resources. Can one ethically stand by and witness the depletion of aquifers, forests, and soils?

The North American Waterfowl Management Plan is but one example of our two countries coming together on an important conservation initiative. We will see agreements such as this replicated at the regional and local levels on river basins, marshlands, and transboundary aquifers. This type of initiative may well take on a new focus toward conservation and sustained development. Indeed, a whole new family of government agreements that provide not only for sectoral development but also for integrated resource management may be in the offing. The efforts of political leaders in this country to follow through on the Bruntland Commission's work has demonstrated that conservation is an issue that is being discussed in the highest offices in the land. The challenge for resource managers is to ensure that it is discussed at every other table in the land.

Water management. In Manitoba, a public information meeting recently was held to discuss a small water license. We expected 10 or 12 people and were flabbergasted to greet more than 300, flanked by solicitors, experts, and the media. The setting for water management decision-making has changed forever.

Water resource managers face a growing challenge. The water quality/quantity interface is becoming contentious and difficult. The resource is seen as becoming scarce and degraded. Licenses and other commitments account for a major portion of presently available supplies. The growing technology in water quality is alerting us to concentrations of exotic chemicals that we never knew of before. The management and understanding of our groundwater resources as well as the relationship between the quality of these resources and the activities of man are only dawning as a major resource management issue.

Aboriginal rights. The matter of aboriginal title to traditional lands and waters in Canada and the United States will command growing attention. The Supreme Court of Canada recognized aboriginal title as common law.

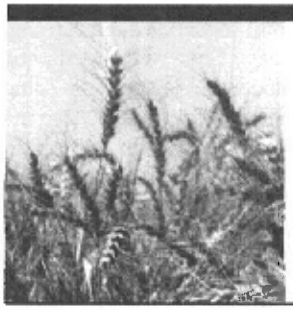
It is worth remembering that the massive James Bay hydro project was halted by litigation over aboriginal title to the lands and waters affected. The result was the James Bay and northern Quebec agreement, whereby the Indians and Inuit surrendered their aboriginal title in return for other lands and for certain controls over the project. The Northern Flood Agreement in Manitoba marks another milestone on this road. These long-term approaches in response to hydro development may well develop in other sectors where aboriginal people will seek participation in all land use initiatives that may affect their lives.

The outlook for resource managers is optimistic, however. There are growing examples of cooperation between all of the stakeholders in resource management. The management of the Beverly and Kaminuriak caribou herds has led to a resurgence of that population beyond the wildest dreams of wildlife managers. Cooperative efforts to manage moose populations have been rewarding. Establishment of a national park in Arctic Canada was seen as consistent with the goals and aspirations of the Inuit people in their land settlement.

The challenge for resource managers will be to function at the community level in building small successes. Successes need to be communicated and repeated so that others learn from what worked rather than waste time trying to figure out how to avoid someone else's mistake.

Soil erosion. In the early 1980s, it was estimated that six tons of topsoil were being lost per ton of grain produced in the United States. Farmers and the U.S. Department of Agriculture were spending $1 billion annually for erosion control on cropland. Despite this massive expenditure, in excess of three billion tons of soil per year were being lost. The Food Security Act of 1985 will bring 40 million acres into a temporary conservation reserve at a cost of about $2 billion annually. The anticipated result is to reduce topsoil loss by one billion tons annually. Globally, it has been estimated that $24 billion would be needed annually to protect cropland from erosion.

Today, the emphasis is on creating incentives on this continent to reward desired behavior. Some argue that we are compensating those who have followed inappropriate practices for short-term gain. In contrast, those who sustain their land productively go unrewarded. Should public funds be used to arrest unsustainable land use?



As resource managers, we must feel responsible for renewing our renewable resources. Can one ethically stand by and witness the depletion of aquifers, forests, and soils?

Can a person play two roles—supporter/advisor/helper on the one hand and regulator/instructor/controller on the other hand? It seems doubtful. If one is the friend of the farmer, then one must be true to that role. If one is the regulator and representative of the broader public interest, then one must be true to that role too. Resource professionals will be faced with this ethical dilemma. Different functions will need to be separated if resource managers are to build credibility and win support for their vision.

Public participation. The community at interest wants and, indeed, insists upon having input to the decisions that affect their lives, their well-being, and their social development. If we view the public as rational, self-interested, and knowledgeable, we can have great confidence in the public participation process and its ultimate outcome. We can know that the participation process will frame a course of action supported by the people.

We need to be flexible in responding to the dynamics of the participation process—or be prepared for a rude awakening. I recall environmental hearings on an arctic pipeline project where the hearings officer refused to consider social and economic matters. Many participants, particularly the native groups, chose to picket the hearings and loudly criticized the process in the media. In three days the hearings willingly considered environment, social, economic, and any other issues that participants wished to bring forward.

The public participation process is an essential element to sustainable development. It will take on growing significance in the formulation of policy, in watershed planning, and in program development.

It is no longer politically, socially, or ethically acceptable to bring great change to the landscape without letting the community have input. Those who will bear some of the costs want input on go, no-go decisions and on the terms and conditions that will govern development.

Management strategies

The forces and issues that influence our continent create an exciting and challenging setting for resource managers. Much has been accomplished, yet much remains to be done. There is a need for strategies that recognize this changing, interwoven, and fragmented mileu. Let me share with you some strategies that may be helpful in this endeavor.

A vision. If we are to muster the support of political leaders, business, and the community for our efforts, we must first articulate a simple, clear vision of where we are going. People volunteering to sandbag a flood need a vision of what is expected—a dam that is a certain width and height and built within a certain time. Such a vision inspires them to work hard through the night and combat the flood.

Building the constituency. Every initiative is influenced by people who might be classified as family, friends, fence-sitters, foes, fools, and fanatics. Family and friends will support the initiative because they share your vision. Fence-sitters may need information and input if they are to become supportive. Foes are unlikely to be won over. Therefore, one might provide information and demonstrate sensitivity to their views in the hope they will drop their opposition and become fence-sitters. The fools and fanatics can create great difficulty. If you have confidence in the vision, then the strategy is to avoid being worn down by the fanatics. Expending limited resources in trying to accommodate the views of fools and fanatics is a sure road to frustration and demoralization.

Value for money. Billions of dollars are required for topsoil protection, reforestation, water management, slowing population growth, improving energy efficiency, and retiring Third World debt. Resource managers will be challenged to demonstrate that any proposed new initiatives provide good value for money.

The development of performance indicators for all programs will be as essential an element in tomorrow's management as the maintenance of accounting records is today. Value for money may call up a flatter organizational structure, a broader span of control, and lower numbers in the upper and middle management levels. Office and information technology can be a great help in this endeavor. As an example, geographic information systems will allow decision-makers immediate access to graphic displays of information without the need for professional experts to interpret data.

Managing incentives. In Canada we have a variety of incentives and subsidies. Each incentive influences how farmers use land. Crop insurance, for example, can be partially subsidized by government to make it more affordable to those who are farming in high-risk areas. This well-intentioned support can encourage farmers to bring marginal land into production because the risk has been reduced through subsidized crop insurance.

The Western Grain Stabilization Act provides a transfer to those who market their grain versus those who feed grain. The Western Grain Transportation Act provides a transfer to those who export grain. Unfortunately, each of these initiatives can bring marginal land into production and increase soil erosion.

Even the tax assessment system, though technically having little impact on conservation, is perceived by many to be taxing all farmland. Many farmers think they are paying taxes on all acreage. So they clear bush, break land, and drain potholes to realize some return from the perceived taxation cost being borne on that land. A farmer assessing the many conservation messages being conveyed by extension people must find it confusing to see so many incentives urging the opposite.

It has been suggested that all forms of support should be conservation friendly or, as a minimum, conservation neutral. The challenge for resource managers is to work with the incentive builders toward the vision of sustained land use. The incentives will be conservation friendly and structured for the long-term benefit of the nation.

Privatization. The efforts of the British government have shown that privatization can be undertaken in a sensitive and win-win manner. Privatization as a management strategy holds significant promise in some public service sectors.

One needs a "zeal for a deal" to envision the opportunities for privatization. But zeal for a deal is not enough. There must also be an adequate population base around which to wrap the deal. As Canada developed, governments took the lead in developing many programs because of the sparse population. There was not the critical mass to warrant the private sector undertaking a risk venture. Now, the situation is different.

Resources that can be freed up through privatization are available for new initiatives, for enhancing underfunded programs, or for expanding regular programs. The resource manager needs policy guidance, an accurate cost picture, and a clear understanding of the risks to pursue privatization. The entrepreneur needs a good understanding of the program, expertise, human and financial resources, and commitment to make the venture successful.

In our national and provincial parks, for example, cooperating associations have taken on a major role in the delivery of interpretive visitor service programs. Local associations, farm clubs, and producer organizations can be the backbone of privatizing soil and water conservation initiatives. A group of farmers in the Deerwood Area of the Red River Valley decided to do something about the drought. Over the past two years, they have constructed 28 small storage dams. That is work born of a vision. It is indicative of opportunities that are waiting for those who have the zeal for the deal with community and other groups in program delivery.

Enhancing the image of resource managers. One cannot enjoy credibility in program delivery if one's image is tarnished. Also, there are no stripes for those who do not earn them. In the tough decision-making environment that lies ahead, the credibility of resource managers could be a critical ingredient.

Practically every public servant can help improve the overall image. Let me cite a few examples. We often see voluminous technical reports written by professionals but inaccessible to the general public for whose benefit they were prepared. No report should be released without being accompanied by a newsletter or brochure that sets forth in summary form the findings and recommendations of the main report. Feature articles on programs, challenges, and accomplishments in community newspapers can contribute to a better understanding by the public.

Many staff members could talk to service clubs about their own jobs. We greatly underestimate the interest people have in the day-to-day work that resource managers do.

Open houses can improve understanding of the agency, and provide feedback to the agency on its performance.

If staff members are proud of their agency, know its mission, and share in its successes, they project positively to all they encounter. If resource managers step forward, the public will see that they are caring and

responsive to community needs.

Minimize doing business with ourselves. The private sector found in the early 1980s that corporate control systems, organizational planning, and policy development processes had become convoluted and were consuming huge sums of money. There have since been major reductions in corporate overhead.

Public sector agencies should declare war on "doing business with ourselves." Most of these processes were built up one step at a time, each in response to a particular need. When someone 20 years ago misused his or her authority, the agency responded by centralizing and invoking control systems for the entire public service—a reaction totally out of keeping with the magnitude of the loss that may have been suffered.

Consultation increases the amount of business we do with ourselves. In one agency I manage, we found that more than 40 percent of our human resources are committed to doing business with ourselves. Clearly, a management strategy to reduce this diversion of energy will free up human resources to work on the many challenges we face.

This will require risk-taking. It will require delegating authority to the lowest level of competence for making that decision. Accountability is a key factor in this pursuit. The builders of control systems can easily forget what the primary function of the organization is: to have satisfied customers and a viable, long-term enterprise.

Ethics. The most significant issues facing anyone involved in resource management tomorrow may well be ethical ones. In particular, those having to do with the treatment of people and the landscape will prove to be most difficult. There are few black and white issues, only gray ones. Choices made will not be between right and wrong, but rather between different and, at times, incompatible value systems; between the rights of this generation and the rights of future generations, between the rights of those who would consume a discovered resource in the shortest time to maximize economic returns versus those who would manage the resource in a transgenerational, economic way.

Development of a code of ethics and a statement of values for resource managers is essential to navigating the complicated waters that lie ahead. Given black-and-white situations, most people will make the right decision. The difficulties arise in the gray areas where there are trade-offs. Where there is a lack of a philosophical base, one may act to minimize personal jeopardy and adverse client reaction. A philosophical base is essential because with it we may conclude that if it seems wrong it is wrong to the public that we serve.

Managers will need to ensure that their staff and community understand our commitment to such basic values as service to the public, accountability, and the public interest. Perceptions are reality to the community. Therefore, public servants might willingly avoid participation in partisan politics and public comment that is likely to impair their political neutrality essential to fulfilling their role in the community.

Developing a statement of principles and values will be necessary. Encouraging discussion on ethical questions in agency newsletters, staff meetings, and the public forum will facilitate a movement toward long-term decision-making and the goal of achieving sustainable development.

If we are to achieve growth without losing ground, then it has to be everyone's job and everyone must do a job. Whatever our role in life, we can undertake initiatives in our daily lives that will help sustain this globe.

The future

Either we build democratic and accountable institutions or the public will face insensitive bureaucracy with regulation as its first-strike capability. We should be prepared to maintain a healthy balance between meeting the interests of those in situ and planning for the next 100 years. Just as a corporation can have a 20-year conceptual plan and a five-year business or action plan, resource managers need both 50-year and 10-year action plans. These plans will determine what should be developed, saved, invested, and consumed. They will be forged on the basis of the many moral and ethical questions of the day. The plans will be accomplished by the community participating at the watershed, river basin, and regional levels. The very process will renew and rejuvenate the democratic spirit of this continent.

Big policies will not be built on bits of science. Problems will be defined accurately. We will recognize that the correct diagnosis is essential to appropriate treatment. Deeply entrenched views will be seen as a hazard and unethical in the value system of the day. Those who are married to their methodology will concede ground to those who are comprehensive generalists. We know that if we change the way we make decisions, we actually change the decisions we make.

People will be empowered through a concept of round tables and teamwork. Interdisciplinary and interagency approaches will be favored over the single champion or advocate approach to initiatives. Multiple use will carry sway over single use.

Information sharing and a new openness will prevail among the parties at interest. We will search out a common understanding of the problem, agree on the essential facts, and identify feasible alternatives. The value system of the decision-makers will determine the outcome.

Providing for clear accountability will enhance decision-making. If we are each accountable for our own actions and if we know the consequences that will follow, then decisions will be considered.

No longer will action be taken only when a major disaster occurs—the Titanic approach. Salvation through drowning is not what sustainable development is all about. We will willingly bequeath benefits to those less fortunate than us and to those not yet born. We will see some of our wealth flow through transfers of information, technology, and money to developing countries.

If we are to achieve growth without losing ground, then it has to be everyone's job and everyone must do a job. Whatever our role in life, we can undertake initiatives in our daily lives that will help sustain this globe. The era of individuality has passed. We now function in an interdisciplinary, transgenerational manner. Resource professionals from all fields must play their role ethically, for without that there will be no sustained development.

If we fail to establish the fundamental values, we will tread water and blow soil rather than achieve our visions. Part-time commitments will not be enough. Resource managers are the key to building community support with the fervor of a new religion whose fundamental belief is in sustaining development. The dream will not be of ever increasing material wealth but of satisfied basic needs, happiness, and a spiritual investment in the land and generations who will enjoy it. □