

A Natural Balance

Working Toward Nova Scotia's Natural Resources Strategy

Biodiversity



Parks



Forests



Minerals

Photos on cover:

Top left

Canada Lynx (*Lynx canadensis*) - Endangered (2002)
Province of Nova Scotia

Top right

Cape Chignecto Provincial Park
Gerry Lunn

Bottom left

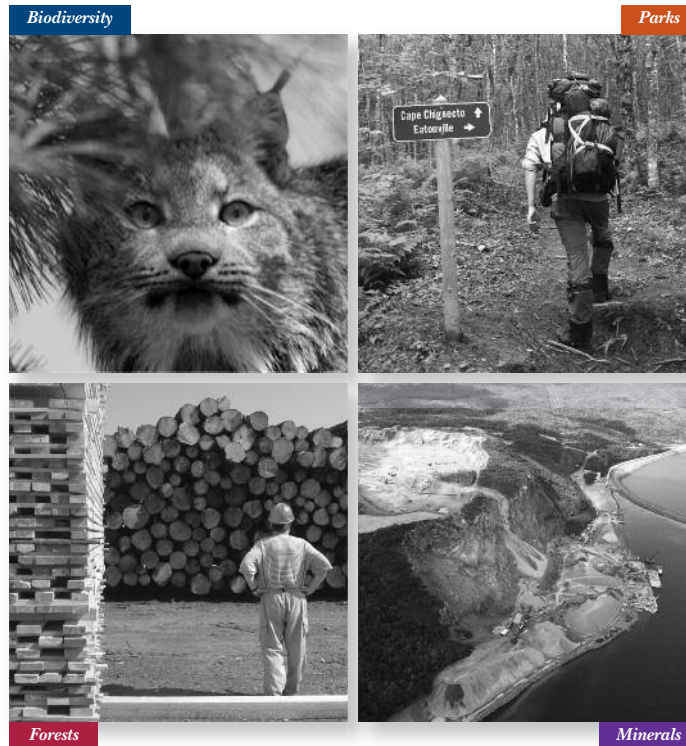
Elmsdale Lumber
Communications Nova Scotia/Michael Creagen

Bottom right

The Martin Marietta quarry on the Strait of Canso
Department of Natural Resources

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STEERING PANEL

This report was authored by members of the Steering Panel as part of the Nova Scotia Natural Resources Strategy 2010 process.

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This document would not have been possible without the input of all those who participated in Phase II and the assistance of our writer and external strategists.

The Steering Panel wishes to note that an important research addendum to this report, including panel of expertise submissions to the Minister of Natural Resources on biomass and clearcutting, can be found on the Nova Scotia Department of Natural Resources website (www.gov.ns.ca/natr/strategy2010/) or in the Department of Natural Resources Library.

Message from the Steering Panel Chair

The Steering Panel acknowledges there are competing demands for Nova Scotia's natural resources. Recognizing the financial situation facing the government today, we recommend that strategic decisions be based on long-range planning. Although we cannot restore our natural resources to what they once were, we can take the necessary steps now to improve the state of those resources. Of particular note, the Steering Panel stresses the need to find a balance between the economic gains of resource consumption against the intrinsic, hard-to-measure benefits offered by a healthy natural environment.

The Department of Natural Resources is to be commended for what it has done so far in implementing the Natural Resources Strategy 2010 process. It has demonstrated integrity by letting the process do its job of creating a vehicle for input from citizens and external expertise to inform policy.

However, as was stated in Phase I, the status quo is not an option. Unless there is change, Nova Scotia's natural resources will continue to be destroyed. We urge Cabinet to act on the recommendations contained in this report - to seize this opportunity to make a substantial change in how government operates, with an aim to creating a future for natural resources.

The Steering Panel requests that our report be used as the framework for the development of the Phase III Strategy. The panels of expertise reports were instrumental in informing the Steering Panel's recommendations. We note the polarization of the forests panel of expertise, which resulted in two reports; therefore the forests recommendations are from the Steering Panel. We strongly advise that the panels of expertise reports be taken into consideration in Phase III and they are attached to this report in their entirety.

We would like to take this opportunity to thank all those who participated in Phase II of the Natural Resources Strategy 2010 for their time, effort, and unique contributions.

The Honourable Constance R. Glube, OC, ONS, QC
Chair, Natural Resources Strategy 2010 Phase II Steering Panel

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Summary

A Natural Balance is the report of the Steering Panel, Phase II of the Natural Resources Strategy 2010. It provides recommendations to the third and final phase of the process to develop a 10-year strategy for Nova Scotia's natural resources, as required by legislation. Of particular note, the report stresses the need to find a balance between the economic gains of resource consumption against the intrinsic, hard-to-measure benefits offered by a healthy, natural environment.

The work of four panels of independent expertise – in the areas of biodiversity, parks, minerals, and forests – informed the work of the Steering Panel and this report. Their reports to the Steering Panel are attached to the end of A Natural Balance. All Phase II reports built on Phase I, in which thousands of Nova Scotians shared their values, concerns, and aspirations. Their values – sustainability, diversity, collaboration, transparency, and informed decision-making – guide a new approach to our natural resources.

The vision proposed for the new strategy is of a Nova Scotia in which

Healthy, diverse natural resources are nurtured and sustained for the economic, environmental, and social benefit of all Nova Scotians today and in the future.

The goal of the strategy is to have a noticeable and lasting impact on the lives of Nova Scotians, with improvements in economic, environmental, social, heritage, and recreational conditions. In addition, the strategy must align with other provincial initiatives, recognizing the connectedness of government's work and the shared responsibility of our resources. The Steering Panel also proposes biennial external review of the strategy for continued relevance, as well as a midpoint renewal of the strategy.

Six strategic priorities are recommended to Phase III for integration into the strategy. They are, in part:

Leadership readiness. That a new strategy for Nova Scotia's natural resources requires a thorough examination of the role and structure of the Department of Natural Resources, including adequate staffing and funding. On a broader scale, the government needs to develop the leadership and organizational readiness to implement the strategy. It must act in alignment with citizens' values, demonstrate professionalism and respect, and actively pursue and achieve collaboration internally and externally. A change in attitudes and mindset is required to implement a new strategy with the intent, spirit, and action of collaboration across departments, across governments, and with all stakeholders.

Citizen and stakeholder engagement. That a new strategy for Nova Scotia's natural resources recognizes the value of citizen and stakeholder engagement to improved decision-making, priority-setting, accountability, and transparency. Such recognition requires structures and policies be put in place committing all participants to full and meaningful contribution.

Legislative renewal and compliance improvement. That a new strategy for Nova Scotia's natural resources includes a review and, where identified, the renewal or creation of legislation, regulation, and policies to reflect priorities. Such a review should consider issues that cross divisions within the Department of Natural Resources, cross departments within the Government of Nova Scotia, and cross jurisdictional boundaries with other levels of government.

Research capacity and knowledge sharing. That a new strategy for Nova Scotia’s natural resources embraces the importance of building research capacity, sharing knowledge, and collecting and managing data, as it relates to furthering our understanding of our resources and to supporting informed decision-making.

Education. That a new strategy for Nova Scotia’s natural resources emphasizes education at all levels – including Department of Natural Resources outreach programs – to broaden understanding of our historical connection to nature and how its resources benefit our current way of life by providing the intrinsic benefits to our social and physical well-being as well as the employment and goods we desire.

Collaboration, co-ordination, and co-operation. That a new strategy for Nova Scotia’s natural resources requires collaboration, co-ordination, and co-operation among the many participants for whom a healthy, natural system is vital – which is to say, all of us, from individuals, to industry, and government at all levels. The collaboration should take the form of everything from community outreach programs to information sharing and partnerships between industry, Mi’kmaq, government, and non-governmental organizations.

The Steering Panel also advises Phase III adopt the **key recommendations** as proposed by the biodiversity, parks, and minerals panels of expertise, found on pages 24, 25, and 26 of A Natural Balance. The members of the forests panel of expertise submitted two reports that reflected different views. The Steering Panel does not propose adoption of one set of recommendations over the other and offers its own in five key areas: the Integrated Resource Management Process; the Code of Forest Practices; regulations governing both public and private lands; government leadership by example; and biomass for power generation.

I. The Opportunity for Change

“Humans have a minor role in this world. Now, for this moment, we are part of its thread. Step lightly and carefully.”

—Awakening: Living With Today’s Forests¹

Nova Scotians stand at a place and in a time of immense challenges: Our forests are stressed by unsustainable practices. Numerous species are under threat. Natural habitats and coastal areas are degrading at worrisome rates. Such challenges, however, offer correspondingly great opportunities. We can choose a new approach.

As we move more fully into the 21st century, we are increasingly aware of how intricately linked our mere human survival is to the grand natural world. General understanding of this reality – it has long been understood by native cultures – has broadened as we face numerous threats to our way of life. Climate change, widespread pollution, and our seemingly insatiable energy appetite, among other issues, are forcing us to take a long, hard look at what we are doing to the Earth that sustains us – and by extension, what we are doing to ourselves.

The status quo is not an option for Nova Scotia, but neither is a return to a time of untouched tracts of unspoiled forests and coastlines. We cannot turn back the clock’s hands. Our small province exists within today’s complex, highly integrated global market system that necessitates the use of natural resources to produce goods and needed jobs.

We cannot alter that reality. What we can do, instead, is to acknowledge that current regulations and compliance are not adequate to protect our resources, even as we use them for our economic well-being. We can endeavour to learn more about our natural environment and how to better sustain it. We can develop a vision that sees further into the future. And we can do so by together finding new ways to balance diverse and often competing interests.

This, then, is the issue at hand: How do we balance the economic gains of resource consumption against the intrinsic, hard-to-measure benefits offered by a healthy, natural environment? How do we balance the demands and fiscal constraints of today against the needs of tomorrow? Indeed, can there be a viable tomorrow if we cannot find a balance today?

The Steering Panel, Phase II of the Natural Resources Strategy 2010, believes that such a balance can be achieved. The panel offers, in the pages of this report, focus and direction to Phase III as it develops a new strategy for our shared natural resources. A Natural Balance presents six recommended strategic priorities and a number of specific recommended actions aimed at enabling Nova Scotia to reach a sustainable state of equilibrium in our natural world.

Achieving a necessary balance will not be easy; change rarely is. It will call on Nova Scotians and their government to be bold and courageous. It will require a steadfast commitment to a long-term perspective. And it will insist on a sense of urgency – because what has become clear is that the best opportunity for change is before us today.

¹ First Nations Forestry Program of Nova Scotia, in co-operation with the Confederacy of Mainland Mi’kmaq, Awakening: Living With Today’s Forests. (Truro, NS: Eastern Woodland Publishing, 2006).

A resounding call

The contents of this report respond to a resounding call for change that emerged in Phase I of the process to develop a new strategy for the province's natural resources. The recommendations on the following pages reflect the collective wisdom and experience of the thousands of Nova Scotians who took part in a provincewide consultation led by Voluntary Planning. To them, and to Voluntary Planning and the dedicated volunteers of the Natural Resources Citizen Engagement Committee, the Steering Panel is indebted.

The Steering Panel is also grateful for the work of the Phase II panels of independent expertise, as well as for the time and expertise of those with whom they consulted, and of Department of Natural Resources staff, who also provided support. The commitment of all to the process and their deep desire to make a difference were evident in five in-depth reports produced by the panels of expertise. Attached to *A Natural Balance* in their entirety, the reports examining the areas of biodiversity, parks, minerals, and forests provided many thoughtful and thought-provoking recommendations and ideas. (After extensive collaboration throughout the process, members of the forests panel submitted two reports reflecting divergent views.)

The five reports informed the work of the Steering Panel as it sought to build on Phase I's citizen-engagement process and its report, *Our Common Ground*. The reader will note this Phase II report reinforces the key values identified by Nova Scotians as important to the development of a new natural resources strategy: sustainability, diversity, collaboration, transparency, and informed decision-making. The Steering Panel urges the Phase III builders of the natural resources strategy to give full and appropriate consideration to the recommendations presented in *A Natural Balance* and integrate them into the strategy. For what has clearly emerged during both Phase I and II is an expectation for change – indeed, a sharp hunger among Nova Scotians to do better for our natural world. Now is the time.

II. A Balanced Approach

The natural balance being referred to in this report is not envisioned as a state of equality between two sides or forces. It is worth clarifying that such balance is not necessarily a halfway point between two opposing states. It is not meant to produce winners and losers. Instead, balance is that state of equilibrium between multiple forces – that point at which the negatives of those forces are minimized. Such balance allows for stability.

Elder Albert Marshall, of the Eskasoni First Nation, teaches a concept that offers a way of achieving such balance. He proposes Two-Eyed Seeing – a means of gaining perspective by seeing from one eye with the strengths of indigenous knowledge and ways of knowing, and from the other eye with the strengths of Western, or Eurocentric, knowledge and ways of knowing. Using both eyes ultimately benefits all.²

As Elder Marshall offered at a 2010 Mi'kmaq Ecological Knowledge learning seminar: "Once we become separated from our natural world, there is profound risk... (But) there is still time in which to reflect on our actions and inactions of the past and try to bring more human consciousness to the tools Western science has brought forth."³

We would do well to apply this approach in understanding how best to address the diverse and competing demands on our natural resources. A strategy for our natural resources cannot be simply about protecting those resources from consumption. Western development requires that we acknowledge the economic imperatives of today's market system – a system that has provided many of us with comfort and security. We have developed technologies and industries that use the Earth's resources – the trees, the minerals, the water – and, in so doing, created jobs and products that have accorded us a standard of living to which we have become accustomed. Yet, our existence depends on a healthy biodiversity and an Earth capable of sustaining life, including our own. Nova Scotians' way of life also includes parks and other spaces protected for public enjoyment in an increasingly urbanized world.

By using both eyes, we can better see and understand the diverse and seemingly competing interests, and we can more ably find ways to balance them. Such broader perspective can also give us a longer-term vision and help us appreciate that, despite the urgency at hand to act, balance will take time to achieve and may require adjustment over time. In this we heed the Mi'kmaq advice to "tread lightly and carefully" and recognize that there is much we do not know and need to learn about our survival in this world.⁴

In this spirit, the Steering Panel offers recommendations for achieving a balance that allows for use of Nova Scotia's rich resources within parameters and in ways that will sustain not only economic but cultural, social, and environmental benefits for Nova Scotians today and many generations into the future. As *Opportunities for Sustainable Prosperity 2006*, the province's economic growth strategy, noted: "Natural capital – our raw materials like water, air, plants, animals, land, and minerals – contributes to the appeal of our communities and fuels our economy. It makes perfect sense to use these resources wisely."⁵

² Marshall, Albert. "Traditional Knowledge Meets Western Knowledge." Mi'kmaq Ecological Knowledge: How to Include This Valuable Resource in Your Work. Halifax. 4 Feb. 2010.

³ Marshall, Albert. (2010).

⁴ First Nations Forestry Program of Nova Scotia (2006).

⁵ Province of Nova Scotia, *Opportunities for Sustainable Prosperity 2006*, An updated economic growth strategy for Nova Scotia (Halifax: Province of Nova Scotia, 2006), 22.

III. Shared Values

As the work of Phase II was guided by citizens who took the time to voice their opinions, concerns, and expectations in Phase I of the strategy development process, so too will the efforts of Phase III be guided. In particular, five key values emerged from the collective wisdom and experience of those who participated in the Phase I process. These values are

Sustainability: Nova Scotians clearly stated they want a natural resources strategy that can provide for them today in a manner that will not negatively impact the culture, society, environment, and economy of generations to come. They want an increasing number of rural jobs to be based on sound ecological principles.

Diversity: Nova Scotians highly value their province's diversity in landscapes, climate, and ecosystems because it allows for a great array of activities and industries and is also reflected in their beliefs, backgrounds, and experiences. Nova Scotians believe diversity is an essential element of a resilient economy, a vibrant ecology, a thriving society, and a healthy lifestyle.

Collaboration: Nova Scotians want the Department of Natural Resources to play a leadership role in bringing together the entrenched, differing viewpoints regarding natural resource management in this province. They also made it clear they want to continue to be part of the decision-making process.

Transparency: Nova Scotians value a more open, clear, and easily understood decision-making process that declares its objectives and criteria in advance and provides measurable outcomes. They want to know the rationale behind decisions that affect their natural resources.

Informed decision-making: Nova Scotians want the Department of Natural Resources to use the best available information that incorporates science, economics, citizen values, and community knowledge when making resource-management decisions. They also need and want to be kept informed so they can better contribute to the decision-making process.

The Phase I final report, *Our Common Ground*; members and backgrounds of the Citizen Engagement Committee; details surrounding the community meetings; written submissions; and other information are available at <http://vp.gov.ns.ca>.

IV. A Vision for Nova Scotians

The Nova Scotia Government took a bold step several years ago when it linked economic prosperity to our environmental and social health and then committed to a period of unprecedented efforts to ensure the long-term sustainability of all three aspects of our lives. Its 2006 economic growth strategy, *Opportunities for Sustainable Prosperity*, outlined priorities and actions to support a strong and competitive economy, a clean and healthy environment, and vibrant, thriving communities. The interdependence of these elements was further reinforced by a unique piece of legislation: the Environmental Goals and Sustainable Prosperity Act, enacted in April 2007. The legislation is government's commitment and belief that Nova Scotia can grow economically without negatively affecting the environment. This is the vision for Nova Scotians.

The Environmental Goals and Sustainable Prosperity Act established two equally important goals for the year 2020: first, to have one of the cleanest and most sustainable environments in the world, and second, to improve provincial economic performance to the national average or better. The act set out 21 objectives in the areas of natural resources, water, climate change, energy policy, air quality, and government leadership. Among those objectives is the commitment to develop a new strategy by 2010 for the province's biodiversity, parks, minerals, and forests.

In keeping with the province's overall vision and direction, and aligned with the values shared by citizens in Phase I and the findings of the Phase II panels of technical expertise and consultations, the Steering Panel offers to those developing the strategy in Phase III a vision of a Nova Scotia in which

Healthy, diverse natural resources are nurtured and sustained for the economic, environmental, and social benefit of all Nova Scotians today and in the future.

The Steering Panel envisions a day in which the province's management and use of its natural resources will be viewed globally as a best-practice model.

V. Goals of the Strategy

The Environmental Goals and Sustainable Prosperity Act calls for Nova Scotia to adopt by 2010 strategies to ensure the sustainability of the province's natural capital in the areas of biodiversity, parks, minerals, and forests. The act intends that these strategies collectively will provide direction for the next decade on the management of some of the province's most important natural assets. The plan is to have a noticeable and lasting impact on the lives of Nova Scotians, with improvements in economic, environmental, social, heritage, and recreational conditions.

The Department of Natural Resources would do well to ensure a new 10-year strategy fits with other provincial strategies and policies, including

- *Opportunities for Sustainable Prosperity 2006*, an economic growth strategy
- *Weaving the Threads: A Lasting Social Fabric*, the province's social policy framework
- *A Treasured Past, A Precious Future*, a strategy for Nova Scotia's heritage

Phase III work must also be mindful of current government initiatives, including work to develop a coastal strategy, a water resource management strategy, an agricultural land review, and a strategy for renewable and clean energy. Aligning these provincial efforts, among others, recognizes the connectedness of the economic, environmental, and social aspects of our lives. Co-ordination speaks to a shared responsibility and increases the chances of success in achieving our vision of sustainability.

The Steering Panel also encourages Phase III to develop a strategy that is dynamic and adaptable, and one that is subject to regular review by an independent party for continued relevance. As recommended in this report, the strategy should include development of a process allowing for biennial public reporting of the plan's implementation. In addition, Phase III should consider a midpoint – at Year 5 – renewal of the strategy. Such a “living” document must, as Phase I urged, have the built-in flexibility to incorporate new knowledge into tools, decisions, and regulation.⁶ As our world changes, we must be well positioned to respond to those changes.

⁶ Natural Resources Citizen Engagement Committee. *Our Common Ground, The Future of Nova Scotia's Natural Resources* (Halifax: Province of Nova Scotia, 2009), 30. Available at <http://gov.ns.ca/govt/vp/NaturalResourcesReport.pdf>

VI. Recommendations for Phase III

A new strategy for Nova Scotia's natural resources requires acknowledging that today's approach is no longer adequate or, in some cases, appropriate. It is perhaps a cliché to say that the world is changing rapidly around us – but that is the reality. The numerous changes in the economy, in industry, in technology, and in the expectations and attitudes of citizens in recent years cannot be ignored. We must respond and adapt to those changes if we are to achieve a vision of a healthy, diverse natural system that benefits our economic, environmental, and physical health.

Disturbing the status quo rarely occurs without discomfort or disagreement. It will not be a smooth or easy process to establish new ways of balancing our use of natural resources for economic growth with the intrinsic social and personal benefits gained from a healthy environment. Doing so will require, of ourselves and our government, the boldness and courage to step forward with the best knowledge and research at hand and make some tough decisions.

Despite the urgency, however, the situation is not all doom and gloom. We can make decisions today that substantively improve our natural world and our place in it. We can choose actions that repair and reverse damage to our forests, for example, and yet still allow for an industry that employs thousands of Nova Scotians. We can choose to use our minerals to benefit our lives and further technological progress, and at the same time ensure we do so in a manner that is sustainable, as the Mi'kmaq counsel, for seven generations. Those types of choices represent the opportunity before us.

Phase I of the natural resources strategy development process advanced us greatly in the effort to make those choices appropriately. Its collaborative and citizen-centred approach ensured the work of Phase II – that of the panels of independent expertise and the Steering Panel – was grounded in the values, concerns, and aspirations of Nova Scotians. The Steering Panel believes the reader will find those values, concerns, and aspirations present in this report.

The Steering Panel trusts that the builders of the new natural resources strategy in Phase III will in turn heed the direction that has emerged from the Phase II process and is conveyed in this report. To that purpose, the Steering Panel strongly advises Phase III to adopt the key recommendations as identified by the biodiversity, parks, and minerals panels of expertise. They are included at the end of this section for ease of reference.

The Steering Panel acknowledges that the two reports from members of the forests panel of expertise reflect the polarization in the sector and in society; it does not propose adoption of one set of recommendations over the other. The panel, however, views many of their recommendations as having similar objectives but divergent approaches and timeframes. Because of this polarization, the Steering Panel makes its own recommendations regarding forests, beginning on page 23 of this report.

In addition, the Steering Panel encourages Phase III to further review and analyze the wealth of recommendations offered in all five reports of the panels of expertise for possible implementation.

To further guide development of the strategy, the Steering Panel also offers to the Phase III process a number of high-level, achievable recommended strategic priorities. Some include specific actions, but for the most part they are to be viewed as recommended strategic priorities for a new strategy for Nova Scotia's natural resources. They are

- Leadership readiness
- Citizen and stakeholder engagement
- Legislative renewal and compliance improvement
- Research capacity and knowledge sharing
- Education
- Collaboration, co-ordination, and co-operation

The order of the above recommended priorities does not imply a ranking. All six are important to ensuring Nova Scotia's natural resources are nurtured and sustained for our economic, environmental, and social benefit.

RECOMMENDED STRATEGIC PRIORITIES

Leadership readiness

Simply put, the Department of Natural Resources must get its own house in order to be able to deal effectively with the challenges before us. Natural Resources was created in 1991 as a result of a merger of two former departments – Mines and Energy, and Lands and Forests – and the department has witnessed numerous changes in the world at large. The many forces that have swirled around the department in the past two decades include global events such as climate change and market upheavals, and progress in technology, research, and so-called green thinking. Plus, there are developments closer to home: Nova Scotia’s aging population, continued outmigration of educated youth, a struggling rural sector, and a looming skills shortage, among others. The department’s structure, leadership, and philosophy have not always responded to these challenges, or responded fully. However, the launching of this strategy development process is an indication of its readiness to change and do better. The Steering Panel lauds the Department of Natural Resources for starting down this road and encourages continued progress. It recognizes that the hard part often comes next: actually making the necessary changes.

The strategy should provide direction and measures toward building government-wide readiness for change that embraces the strength of collaboration. Such organizational and leadership readiness would position and prepare Nova Scotians to best meet the challenges of nurturing a healthy, diverse, natural world that sustains economic activity, and community and personal well-being.

The Steering Panel calls for a different type of leadership – one in which citizens have genuine input. It is an inevitable shift in governance across Canada as citizens become more fully engaged in the public dialogue and decision-making that affect their lives and their future. The importance of this shift is reflected in a separate recommended priority that addresses citizen engagement.

With regard to leadership readiness within the department, however, citizens’ voiced expectations signal a need to re-orient thinking and practices toward land stewardship, biodiversity conservation, and a priority toward protecting and preserving significant natural and cultural heritage. In addition, leadership with citizenship participation, as indicated in Phase I and reinforced in Phase II, means an expectation that forest management practices will lead to greater sustainability.

Recommended strategic priority

That a new strategy for Nova Scotia’s natural resources requires

- a thorough examination of the role and structure of the Department of Natural Resources, including adequate staffing and funding
- that the government develop, on a broader scale, the leadership and organizational readiness to implement the strategy. It must act in alignment with citizens’ values, demonstrate professionalism and respect, and actively pursue and achieve collaboration internally and externally. A change in attitudes and mindset is required to implement a new strategy with the intent, spirit, and action of collaboration across departments, across governments, and with all stakeholders.

Citizen and stakeholder engagement

Nova Scotians value being heard – that was made clear in Phase I of the strategy development process and reiterated in Phase II. At the outset, the Department of Natural Resources committed to a more collaborative, citizen-centred approach to develop its new strategy, and for that commitment, the Steering Panel commends the department. Government in a democracy cannot be all-knowing and all-seeing; it cannot be expected to always have the best, most current information at hand for decision-making. It cannot have all the answers. And citizens cannot feel fully trusting of a government if their concerns are not heard, or if they cannot understand how a decision was reached.

That the strategy development process has been collaborative and transparent, providing the opportunity for thousands of citizens and stakeholders to take part, can only benefit Nova Scotia's management of its natural resources. The process, designed to bring about change in the very way in which it was structured, has shown itself in both Phase I and II to be effective and worthwhile. It has enabled relationships allowing for information to be shared, ideas exchanged, perspectives broadened, and issues more fully understood. All this leads ultimately to better, more widely supported decisions.

In Phase I, Nova Scotians were invited to 27 community meetings provincewide; about 2,000 people attended and many spoke about their experiences and ideas. Others shared their views through more than 600 written submissions, which were reviewed and analyzed with the comments gathered from the community meetings. Three workshops attended by more than 100 participants clarified and refined the input for the Phase I final report. As that report, *Our Common Ground*, noted: "Nova Scotians positively responded to the opportunity to help align policy and programs with their values." ⁷

The collaborative approach continued in Phase II with panels of expertise selected from among Nova Scotians with knowledge and experience in the four areas of biodiversity, parks, minerals, and forests. Guided by the values identified in Phase I, they in turn sought the input of stakeholders provincially, nationally, and internationally to conduct detailed analyses of our natural resources. The panels of expertise received 114 written submissions and conducted more than 200 meetings with individuals from associations, non-government organizations, industry groups, companies, and government; they also met with more than 140 students. The task now is to carry forward this commitment to collaboration through Phase III and beyond.

Recommended strategic priority

That a new strategy for Nova Scotia's natural resources recognizes the value of citizen and stakeholder engagement to improved decision-making, priority-setting, accountability, and transparency. Such recognition requires structures and policies be put in place committing all participants to full and meaningful contribution.

Among specific actions, the Steering Panel recommends the development of an external scorecard that reports biennially on the progress the department is making toward implementing a new strategy.

⁷ Natural Resources Citizen Engagement Committee. (p. 5).

Legislative renewal and compliance improvement

A number of signs lead us to believe that we have, in many ways, reached the limits of the current way of doing things. Stressed forests, eroding coastlines, species at risk, and growing energy demands – these are just a few of the challenges we face today. Much as the structure and role of the Department of Natural Resources may be out of sync in dealing with these issues, so too are some of the legislation, regulations, and policies that deal with them. Despite the important gains current policies and practices have allowed, the world is different from the one that gave rise to many of them. In addition, our understanding of human interconnectedness with the natural environment continues to grow, and with that understanding comes an awareness that the time has come for us to define a new relationship with nature.

For example, the thinking surrounding biodiversity has evolved as the way scientists have come to describe the variety of life on Earth.⁸ It is the foundation upon which social, economic, and environmental prosperity develops. No Nova Scotian is unaffected by the province's biodiversity and its benefits. Yet, biodiversity has no home in the Department of Natural Resources or, indeed, the Government of Nova Scotia. It requires the structure and leadership that will enable sustainable management of biodiversity in the province.

Another area of concern is the degree to which legislation has kept current with developments and priorities. The Mineral Resources Act, for example, requires a review and update. Among the considerations are shared economic benefits of our resources and communities' growing interest in the environmental assessment process, and whether this calls for, among other things, a need to include pits and quarries in the legislation. The act must also be reviewed with an eye to how best to govern future technologies, such as groundwater use for geothermal heating.

The best-crafted law, however, is no guarantee that compliance will follow. Challenges with inconsistent or inadequate monitoring and enforcement persist. As part of the legislative renewal, the Steering Panel encourages an examination of practices – including education, support, and incentives, as well as enforcement – to improve compliance in those areas found wanting.

Recommended strategic priority

That a new strategy for Nova Scotia's natural resources includes a review and, where identified, the renewal or creation of legislation, regulation, and policies to reflect priorities. Such a review should consider issues that cross divisions within the Department of Natural Resources, cross departments within the Government of Nova Scotia, and cross jurisdictional boundaries with other levels of government.

Among specific actions, the Steering Panel recommends the government develop, adopt, and implement biodiversity legislation. It also recommends that several acts be reviewed and updated, including but not limited to

- *Beaches Act*
- *Crown Lands Act*
- *Environment Act*
- *Forests Act*
- *Mineral Resources Act*
- *Provincial Parks Act*
- *Trails Act*
- *Wildlife Act*

⁸ Panel of Expertise Report on Biodiversity. Executive Summary. Attached.

Research capacity and knowledge sharing

As we push the boundaries of our knowledge out further, we discover yet again how much there is still to learn about our complex world. Such is the nature of research – that with each question answered, a dozen more arise. Both Phase I of the strategy development process and the Phase II panels of expertise noted this ongoing process of research and its importance to making informed decisions about Nova Scotia's natural resources. The Steering Panel agrees that our capacity to conduct research, as well as manage and share it, is essential to gaining the most current knowledge of how best to respond to the challenges facing the province.

Research can, for example, enhance our understanding of the forest ecosystem, help guide the direction of a forest management strategy, and evaluate successes and failures. Because our resources are finite and our competition global, ensuring that best practices are adopted and disseminated is a high priority. We must protect and sustain our resources for their use as raw materials in manufacturing and processing – and the jobs they produce – as well as for their importance to our health and enjoyment of life. The Department of Natural Resources can play a lead role in this regard by setting an example and insisting on the use of best practices on public lands.

Clearly, research in itself has limited value. To be more fully leveraged, data and evidence must be interpreted, evaluated, shared, applied, managed, collected, and categorized. Moreover, research and information must be widely available – not only to those within a specific discipline, but to researchers in other disciplines and to members of the public. Our world is so interconnected that interdisciplinary approaches, including scientific and traditional, can offer solutions to issues that have long confounded us. A deliberate effort to co-ordinate, manage, and share research knowledge within and outside government – including an exploration of using technological means to do so – can vastly support the effort to improve the decisions we make.

Recommended strategic priority

That a new strategy for Nova Scotia's natural resources embraces the importance of building research capacity, sharing knowledge, and collecting and managing data, as it relates to furthering our understanding of our resources and to supporting informed decision-making.

Among specific actions, the Steering Panel recommends the government establishes

- an external scientific advisory panel to provide the Minister of Natural Resources with current information on issues; consider an interdisciplinary knowledge approach, i.e., sources to include community traditional knowledge and Mi'kmaw ecological knowledge, as well as social and scientific knowledge
- a virtual science institute to enable the science community within the provincial government to work together and maintain relationships with external researchers

Education

Observe children on a field trip into the natural world, and you will see hands-on learning fuelled by boundless enthusiasm and wonder. Beyond the benefits of fresh air and outdoor activity, our children have the opportunity to reconnect with nature and its important historical role in our lives and in human development. Such educational opportunities allow them to gain a greater sense of their own responsibility as shared stewards of the environment, while at the same time more fully understanding how their daily lives are affected – and continuously improved – by use of natural resources. Our future belongs to the youth of today. Providing them with early and ongoing opportunities to expand their knowledge of nature is our best hope over the long term of balancing needed economic growth with the intrinsic value of a healthy, diverse, natural world.

Whether in a classroom or outside, education is also vital to the not-so-young of today as we face urgent choices. This is particularly true as our society becomes increasingly urbanized and our rural communities shrink. For many Nova Scotians, our connections to the natural environment are considerably weaker than those of our parents and grandparents. Yet, we need an understanding of biodiversity and the many issues at play if we are to be fully engaged as citizens, capable of affecting decisions and taking action to ensure sustainability. Education need not take place formally in curricula, but can be in the shape of outreach programs, media campaigns, or online information, and with increased interaction involving Mi'kmaq, non-governmental organizations, and government.

Education can also serve a significant role in improving regulation compliance. It can be a key element of a balanced program that includes enforcement, support, and incentives or recognition. For example, a renewed education program can serve to inform land owners of sound resource conservation principles, including how to maintain soil productivity. Another example: workshops for stakeholders can help them understand new regulations or guidelines for pit and quarry operations. As with all education, this approach represents a front-end investment that offers a return far into the future.

Recommended strategic priority

That a new strategy for Nova Scotia's natural resources emphasizes education at all levels – including Department of Natural Resources outreach programs – to broaden understanding of our historical connection to nature and how its resources benefit our current way of life by providing the intrinsic benefits to our social and physical well-being as well as the employment and goods we desire.

Collaboration, co-ordination, and co-operation

We are greater than the sum of our parts, and citizens who issued a near-unanimous call in Phase I for greater collaboration in decision-making understand this inherently. They point to the interconnectedness of the province's natural resources, and the unrealistic attempt to protect and maintain each in isolation. The Steering Panel strongly supports Nova Scotians' call for those who manage our resources to "come out of (their) internal silos" and work more co-operatively within the Department of Natural Resources, with other departments provincially, and with other levels of government.⁹ It calls for better co-ordination of roles, policies, and programs across the board to achieve a shared vision of a natural environment that allows for sustainable prosperity.

A clear example of where disconnect occurs concerns parks and protected areas. Currently, parks are the responsibility of the Department of Natural Resources, and protected areas are that of the Department of Environment. These assets are critical to the government's efforts to protect 12 per cent of the province's land mass by 2015. Developing an integrated, efficient, co-operative approach to managing them should be a priority.

Collaboration also encompasses a role for citizens in decision-making. Nova Scotians "see a wealth of collective knowledge existing within Nova Scotia and believe the department would benefit by tapping into this valuable resource," the Phase I report noted.¹⁰ There is hope, too, that by bringing together differing views, the Department of Natural Resources can help find common ground. The Steering Panel supports this direction and recommends citizen and stakeholder engagement as a strategic priority, as outlined earlier in this report.

It is worth noting that, as much in the world, the six recommended strategic priorities are interconnected, and as such, collaboration, co-ordination, and co-operation are called for in the other priorities. Most notably, building research capacity and sharing knowledge across disciplines will require scientists and others, externally and internally, to work together toward a shared purpose of better understanding our natural world. A legislative renewal cannot ignore, for instance, the role of environmental legislation that resides in another department. Reaching children through formal educational programs will necessarily involve the Department of Education; these programs can also greatly benefit from the input of non-governmental organizations and native cultures. No more than we can examine our ecosystem in discreet parts can we address its challenges singularly.

Recommended strategic priority

That a new strategy for Nova Scotia's natural resources requires collaboration, co-ordination, and co-operation among the many participants for whom a healthy, natural system is vital – which is to say, all of us, from individuals to industry and government at all levels. The collaboration should take the form of everything from community outreach programs to information sharing and partnerships between industry, Mi'kmaq, government, and non-governmental organizations.

⁹ Natural Resources Citizen Engagement Committee. (p. 16).

¹⁰ Natural Resources Citizen Engagement Committee. (p. 16).

FORESTS – RECOMMENDATIONS FROM THE STEERING PANEL

The Steering Panel acknowledges the many pressures facing the province: among them, the need to reduce greenhouse gases, the call for biomass for power generation, the requirement for economic growth, and the reality of the province's fiscal situation. While mindful of these pressures, the panel strongly urges caution in any decision by government to approve use of biomass for power generation. The Steering Panel advises that the province view the current agreement between NewPage Port Hawkesbury Ltd. and Nova Scotia Power Inc. as a pilot project and carefully monitor its impact on forests over time, basing future decisions on those findings.

As Nova Scotians broaden their understanding and shared stewardship of the resource, the Steering Panel recommends for forests:

Integrated Resource Management Process

- Complete, implement, and work toward the full adoption of the Integrated Resource Management Process on both public and private lands.

Code of Forest Practices

- With broader stakeholder input, complete, implement, and enforce the Code of Forest Practices on both public and private lands.

Regulations (Public and Private Lands)

- Require management plans prior to cutting on all public and private lands.
- Allow clear-cutting by permit only.
- Allow use of pesticides and herbicides by permit only.
- Stop whole-tree harvesting as a forestry practice, except for Christmas tree farms.

Leading by Example

- Use best-management practices on all public lands.
- Strongly encourage best-management practices on private lands.
- Include the promotion of diversity of the forests, in both species and age of trees.

Biomass for Power Generation

- Exercise great caution in the use of biomass for power generation. There is ample evidence that our forests are already under considerable stress. Despite the need to reduce greenhouse gases, Nova Scotia does not have the wood capacity for biomass use to make much of a difference even provincially. It is counter-intuitive for the province to protect the environment by cutting down too many trees or reducing the quality of already thin and acidic soils. The province should instead encourage the exploration and expansion of other sustainable methods to generate power and, at the same time, methods to conserve energy and reduce demand.

BIODIVERSITY – RECOMMENDATIONS FROM THE PANEL OF EXPERTISE

- Nova Scotia needs a Biodiversity Act and other regulatory and stewardship tools, designating the Department of Natural Resources as the lead department and the departments of Agriculture, Environment, Fisheries and Aquaculture, and Energy as key departments.
- Informed decision-making could be greatly enhanced with the co-ordination and establishment of an external science advisory body, and further development of internal scientific expertise to provide advice to the minister based on the most up-to-date scientific understanding of issues affecting biodiversity.
- The Government of Nova Scotia should strive to enhance public understanding of the importance of protecting biodiversity, soil, water, and air quality and in collaboration with land owners, industry, non-governmental associations, and educational institutions.
- A co-operative effort is required to survey and monitor biodiversity and manage data storage, organization, and distribution for spatially referenced biological and physical information for the province of Nova Scotia. This effort should be led by the Department of Natural Resources.
- A biodiversity education program including age-appropriate, experiential curriculum should be developed by the province to address biodiversity and ecological goods and services across all grades from Primary to grade 12 in order to develop a new generation of stewards for our province's natural resources.

PARKS – RECOMMENDATIONS FROM THE PANEL OF EXPERTISE

- Protection of Nova Scotia’s natural and cultural heritage should be the overriding priority of the provincial parks system. Legislation, policies, management plans, and programs should all reflect this priority, fully incorporating ecosystem-based approaches, considerations of ecological integrity, and biodiversity conservation.
- A coherent, fully integrated, and functionally effective parks and protected areas program should be re-established within the provincial government.
- The Department of Natural Resources should be reworked, restructured, and renamed to demonstrate a fundamental renewal, with emphasis on land stewardship, biodiversity conservation, protection of provincially significant natural and cultural heritage, and an integrated approach to ecosystem-based planning and management.
- The mismatch between current low levels of park funding and the high expectations of Nova Scotians with respect to parks must be addressed. A comprehensive review of funding requirements should be undertaken for the provincial parks program to establish core funding targets. Actions should be taken to enhance funding levels as well as to explore opportunities for cost savings and increasing efficiencies. This should take place in conjunction with the updating and completion of the deferred provincial parks system review process.
- Greater attention should be paid to involving Nova Scotians systematically in our parks and protected areas. This should include establishment of a Nova Scotia Parks and Trails Advisory Board, and of local park advisory boards. Partnerships in park and trail development and management should be encouraged, but clearer guidelines for these are needed. Particular attention should be paid to interdepartmental co-ordination, involvement of municipalities, and strong collaboration with local communities.

MINERALS – RECOMMENDATIONS FROM THE PANEL OF EXPERTISE

- Additional resources (funding and staff) are required to address the following critical geoscience issues: (1) systematic and comprehensive (provincewide) groundwater mapping is needed to identify the resource potential and the risks to that resource by 2020, and (2) an integrated, provincewide coastal geology mapping and hazard assessment program should be in place by 2020.
- A comprehensive and effective communications, advisory, and education strategy is required for school curriculum, communities, planners, regional development authorities, politicians, other departments, and non-governmental organizations to increase awareness of the vital importance of geoscience and geological resources in society. In this process, the Department of Natural Resources must strive to promote informed stakeholder engagement as a critical element in the sustainable development of mineral resources. The strategy would also include the appointment of geoscientists to a permanent, external science advisory panel to the minister by 2012.
- There is a need to identify and prioritize opportunities in historical areas of mineral resource production for immediate reclamation and remediation. Sites with recoverable resources (e.g., gold in mine tailings) or environmental stressors (e.g., arsenic and mercury in mine tailings) should be evaluated for reclamation potential.
- The Prospector’s Assistance Program should be reinstated to encourage mineral resource development in Nova Scotia. The total value of this program should be restored to at least 1997-2002 levels (\$600,000) with a goal to match New Brunswick levels by 2015.
- The outdated Mineral Resources Act requires updating to reflect present and future economic, social, and environmental priorities. This must include consideration by all relevant stakeholders that aggregates, gypsum and quarry stone, non-Crown limestone, and groundwater be declared as “minerals” under the act.
- An externally managed annual review process is required to monitor implementation of strategy recommendations, to be in place by 2012.

VII. The Next Step

Let us grasp the opportunity before us. Let us not stand still, ineffective in our lack of direction and focus. Let us work hard to understand fully the challenges and the choices before us. And then let us act.

Nova Scotians have clearly voiced their deep concern about the current state and future of the province's natural world. In Phase I of the natural resources strategy development process, citizens asked for a new direction and better ways to interact with our natural world so that we can benefit economically, socially, and physically over the long term. Many acknowledged the tough decisions ahead, and that not everyone would agree with those decisions. Consensus, instead, was in the need to change the status quo and to do better.

Phase II took this task to heart, and the Steering Panel and panels of expertise spent many months conducting and reviewing detailed analyses and preparing recommendations for the third and final phase of the strategy development. This report, *A Natural Balance*, brings those recommendations together: specific recommendations for biodiversity, parks, minerals, and forests, in addition to six overarching strategic priorities: leadership readiness; citizen and stakeholder engagement; legislative renewal and compliance improvement; research capacity and knowledge sharing; education; and collaboration, co-ordination, and co-operation.

The Steering Panel also advises that the new strategy takes an approach that balances our economic needs against the intrinsic benefits offered by a healthy natural environment. It encourages a decision-making perspective that embraces traditional and Mi'kmaw ecological knowledge as well as scientific advances. It also stresses the urgency of change and a setting of new direction, with an eye to a future that we cannot yet see.

A Natural Balance offers a strong foundation upon which to build an effective 10-year strategy for Nova Scotia's vital resources. The Steering Panel urges Phase III to integrate the recommendations as detailed in this report. It also proposes the strategy includes a process to ensure these recommendations are implemented. The strategy will give Nova Scotia direction and focus in how it nurtures and sustains its natural resources for our long-term benefit. Action must follow.