

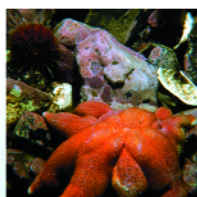
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Fisheries and Oceans Canada

Sustainable Development Strategy 2001-2003

Building Awareness and Capacity:

**An Action Plan for
Continued Sustainable
Development 2001-2003**



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Canada



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Published by:
Fisheries and Oceans Canada
Ottawa, Ontario
K1A 0E6

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Cat. No. Fs23-329/2001
ISBN 0-662-65483-8

Printed on recycled paper



Minister's Message

Canada's aquatic resources, both oceans and freshwater, are central to Canada's history, to its economic well being and to the quality of life in Canada. Whatever their specific interests, all Canadians place a high priority on protection of our aquatic resources and ecosystems. Fisheries and Oceans Canada (DFO) shares this priority, and is committed to making the most of the social and economic benefits that these resources can bring to present and future generations of Canadians.

To do this, we are anchoring our activities in the principle of sustainable development – finding the best ways to integrate economic, environmental and social considerations into the conservation, protection, and use of our aquatic resources. The concepts of sustainable development are central to DFO's mandate and its responsibilities to Parliament and the people of Canada.

As the past century has demonstrated, Canada's fisheries and oceans are vulnerable – and that makes Canadians vulnerable if we do not take steps to protect and conserve our aquatic resources over the long term. Sustainable development calls for striking a better balance between protecting our fragile aquatic resources and ecosystems and developing economic opportunities based on their use.

For DFO, striking this balance means many things. For example, it means finding ways to manage activities in our oceans in an integrated fashion, with proper respect paid to economic, environmental and social



concerns, in consultation with all interested stakeholders. It means learning how to apply the precautionary approach, both domestically and internationally, in order to better understand and respect the limits and risks of harvesting. It means

cultivating scientific excellence to increase our understanding of aquatic ecosystems. It means encouraging a thriving marine services industry through the use of new technologies and developing a strong and environmentally sustainable aquaculture industry.

This document, which outlines DFO's sustainable development strategy and action plan, is a clear expression of our continued commitment to sustainable development. Together with other federal departments, we are supporting the Government of Canada's overall strategy for achieving what Canadians expect: protection of our natural environment, sustainable use of natural resources, and economic and social benefits for Canadians now and in the future.

*The Honourable Herb Dhaliwal, P.C., M.P.
Minister of Fisheries and Oceans Canada*



Executive Summary

What is a Sustainable Development Strategy?

An international plan for sustainable development was endorsed at the “Earth Summit” in Rio de Janeiro in 1992. Sustainable development became an integral element of Canadian Government policy in 1995. Since then, federal government departments have been required to prepare three-year strategies, indicating how they plan to work toward sustainable development. DFO is building upon the lessons learned in its first strategy in 1997 to produce the best possible Strategy for 2001 through 2003.

DFO’s commitment to Sustainable Development

A new policy statement expresses DFO’s commitment to support sustainable development. The policy states that DFO undertakes to integrate economic, environmental and social considerations in our decision-making. It incorporates the Department’s Vision statement and is inspired by our commitment to continuous learning and cost-effective achievement of results.

DFO’s sustainable development goals for 2001-2003 will be oriented to change, confirming and continuing the new strategic directions for the Department. Our aim is to move effectively toward making a difference specifically in the area of DFO’s responsibilities as well as contributing to the broad sustainable development objectives of the Government of Canada.



Themes

The nature of DFO's mandate means that sustainable development is relevant to almost everything that DFO does. To be more effective, however, we plan to concentrate our efforts during 2001-2003 by highlighting key directions. The following are the four themes DFO will focus on to support sustainable development for the next three years.

New Forms of Governance and Shared Stewardship

The concept of sustainable development promotes integration, achieved through new ways of making decisions that seek to recognize the complex inter-relationships within and between aspects traditionally characterized as the environmental, the economic and the social or cultural. Such an approach to making decisions constitutes a profound commitment to change on the part of both government and society. The changing expectations of both government and society will have to be embodied in new forms of governance. **Four** target outcomes will fall under this theme.

Knowledge and Technology for Sustainable Development

Adapting quickly to increasing complexity and inter-dependence in a dynamic operating environment is increasing the need for new research, finding new ways of organizing and communicating knowledge, identifying new sources and different types of knowledge and developing and using new technologies. **Eleven** target outcomes will help us to develop this theme.

Sustainable Operations

Work will continue on reducing the environmental impact of DFO's operations through the implementation of an Environmental Management System within DFO that is consistent with internationally recognized environmental management standards, e.g. ISO 14001. DFO has identified 23 aspects that leave an environmental footprint. **Five** target outcomes under this theme will make DFO a "greener" department.

Managing for Progress and Performance

Performance assessment of sustainable development goals and outcomes will be part of the new performance measurement system being developed to support reporting to the public and to Parliament and to strengthen an organizational culture in DFO in which achievement of results will drive decision-making. **One** broad target outcome of systematic review of progress and measurement of performance against commitments will improve the management of this Strategy and Action Plan.

Why are these commitments important?

Working within DFO, and with partners in the public and private sectors, to achieve the horizontal goals of the Sustainable Development Strategy will have beneficial impacts on Canada's aquatic environment and resources and our economic prosperity. The benefits include improving marine safety, preventing pollution, better understanding and use of scientific research resources and protection of fish habitat.

DFO is committed to *seek safe, healthy, productive waters and aquatic ecosystems, for the benefit of present and future generations, by maintaining the highest possible standards of service to Canadians, through marine safety and environmental protection; scientific excellence; and conservation and sustainable resource use.* That is DFO's Vision and this Strategy and Action Plan is one of the ways the Department is demonstrating its ongoing commitment to sustainable development.

Conclusion

The Action Plan chosen by DFO is selective and focuses on areas where the Department can be most effective. In addition to the 21 target outcomes, work will continue in other areas that complement the new Sustainable Development Strategy. Managing and protecting Canada's oceans and freshwater resources is a task of immense importance for Canada's economic prosperity and our quality of life, now and in the future.



Introduction

The future of Canada's aquatic ecosystems and the way we use our aquatic resources are key to the quality of life in Canada. Coastal and fishing communities across Canada gain social and economic value from using oceans resources. How to maintain those economic and social benefits while protecting and restoring environmental health, such as productive fish habitat, is a key challenge for all Canadians. Environmental health is critical to human health. Understanding the role of oceans in global climate

The long term economic and social well-being of every Canadian depends on the state of our natural environment.

change and how to manage Canada's fresh-water resources are increasingly urgent concerns. Uses of aquatic resources often sustain cultural values among Canadians. The mandate and responsibilities of

Fisheries and Oceans Canada (DFO) gives the department a leading role in addressing this major public issue in Canada.

Many Canadians are keenly aware of the various pressures affecting Canada's oceans and freshwater resources:

- consumption and population pressures;
- climate change and its unpredictable effects on the life cycles of fish;
- increasing use of waterways for marine transportation and increased risk of oil spills;

- loss of biodiversity and productive fish habitat and gaps in addressing the needs of species at risk and their habitats;
- excessive fish harvesting capacity;
- environmental challenges of aquaculture development;
- challenges of socio-economic viability and diversification in coastal communities;
- industrial pollution deriving from various sources, such as forestry, mining and transportation activities and urban sprawl;
- pressures affecting provision of government services, such as search and rescue; and
- increasing demands on ocean and freshwater resources for tourism and recreational purposes.

Concerns regarding conservation and management of Canada's fisheries and fish habitat, of other ocean resources and of marine and freshwater environments relate in part to the significance of these resources in the Canadian economy. The oceans sector generated almost \$20.0 billion of Canada's gross domestic product (GDP) in 1996 (latest figures available), from such sectors as commercial fishing, shipping and shipbuilding, tourism, manufacturing and services, and oil and gas industries. Increasingly, the economic value from Canada's oceans derives not from exploitation of renewable or non-renewable resources but from services such as international sea-borne trade, tourism, especially cruise ship tourism, and communications infrastructure, such as submarine fibre-optic



cables. In addition, the oceans sector contributes indirectly to economic activity in other sectors of the Canadian economy.

Canada has the world's longest coastline, and approximately 7.1 million Canadians (23%) live in coastal communities, many depending on the coast and seas to make a living. Canada's total territory – its landmass plus the continental shelf off our three coasts – is 40% submerged, under coastal waters, such as the Grand Banks off Newfoundland, or under internal waters, such as the Great Lakes or Hudson Bay. It is an important, and increasingly urgent, challenge to protect and manage this geographic and ecological heritage.

Demand for conservation and sustainable development of our fisheries and ocean resources relates also to Canada's international commitments. At the "Earth Summit" in Rio de Janeiro in 1992, representatives from 178 nations, including Canada, endorsed a plan of action – **Agenda 21** – to address the pressing issues of international development and environmental protection. The cornerstone of that action plan was the concept of sustainable development, and all countries were called upon to produce strategies to achieve sustainable development.

To strengthen Canada's international commitment, the federal government amended the *Auditor General Act* in 1995, making sustainable development an integral element of Government policy. These amendments also established the Commissioner of Environment and Sustainable Development, whose

**Sustainable
development is
development that
meets the needs of
the present without
compromising the
ability of future
generations to meet
their own needs.**

The Brundtland Commission

role is to help Parliament and the Canadian public monitor implementation of sustainable development strategies and federal commitments to action. In accordance with the Act and the "Guide to Green Government", 28 federal departments and agencies, including the Fisheries and Oceans

Canada, tabled their first sustainable development strategies in Parliament in 1997.

The Government of Canada has acknowledged the fundamental relationship between environmental health and a healthy economy and social quality of life in Canada. Plans to address a number of environmental problems both domestic and global were indicated in the 1999 Speech from the Throne, including a promise to place greater emphasis on sustainable development in government decision making. The Commissioner of the Environment and Sustainable Development produces a report every May to record the Government's performance on sustainable development, its successes and its failures in meeting commitments. In his December 1999 Report, entitled *Moving Up the Learning Curve: The Second Generation of Sustainable Development Strategies*, the Commissioner outlined his expectations of federal departments and agencies in preparing their second

sustainable development strategies. “Moving Up the Learning Curve” stressed the need to close the “implementation gap”, making suggestions on how to improve performance, notably by analyzing experience gained during the term of the first sustainable development strategies and by setting clear and measurable targets for change.

DFO and Sustainable Development

Sustainable development is fundamental to DFO’s legal mandate, its policies and programs. In cooperation with other federal departments, other levels of government, Aboriginal groups and private and voluntary sector stakeholders, DFO is responsible to Parliament and the people of Canada as follows:

MANDATE

The Department of Fisheries and Oceans, on behalf of the Government of Canada, is responsible for policies and programs in support of Canada’s economic, ecological and scientific interests in oceans and inland waters; for the conservation and sustainable utilization of Canada’s fisheries resources in marine and inland waters; for leading and facilitating federal policies and programs on oceans; and for safe, effective and environmentally sound marine services responsive to the needs of Canadians in a global economy.

In addition to its mandated responsibilities, DFO operates a large fleet of ships, houses its staff and facilities and maintains light stations. It is also responsible for influencing and regulating the behaviour of others, such as fishermen, marine shippers, fish farmers, recreational boaters, tourism operators and many others, as they interact with the aquatic environment and aquatic resources. DFO’s legislative mandate includes the *Oceans Act*, the *Fisheries Act*, and the *Navigable Waters Protection Act*, as well as other statutes. In addition, DFO shares responsibilities with other federal government departments under the *Canada Shipping Act* and other statutes. Provinces, territories and some Aboriginal groups also have responsibilities with respect to fisheries which DFO takes into account in carrying out its mandate. The federal/provincial/territorial Agreement on Inter-jurisdictional Cooperation, ratified by Canadian Ministers responsible for fisheries and aquaculture in Quebec City in 1999, guides the department’s relations with the provinces and territories on these issues. With respect to Aboriginal communities, DFO, as part of the federal government in general, has a responsibility to manage fisheries in a way that is consistent with the constitutional protection provided to Aboriginal and treaty rights.

DFO also has responsibilities under the *Canadian Environmental Assessment Act* (CEAA), which came into force in 1995. DFO plays a major role in the application of CEAA, primarily from its regulatory decision-making responsibilities under the *Fisheries Act*, the *Navigable Waters Protection Act*, and the *National Energy Board Act*.



In 1997, DFO published its first Sustainable Development Strategy, *A Framework for Action*, and has worked at implementing it over the past three years. With continued direction from the Office of the Commissioner of the Environment and Sustainable Development (CESD) and following the assessment of our first Strategy, DFO is now 'moving up the learning curve' to ensure that Canada's marine and freshwater resources and ecosystems are managed responsibly and developed sustainably for Canadians today and for future generations. This document proposes a second Sustainable Development Strategy and Action Plan for DFO for the next three years.

Assessing our Progress on Sustainable Development

A Snapshot of DFO Success Stories

DFO's successes in advancing sustainable development outcomes since 1997 would include the following:

- **Sustainable development of Canada's oceans** through implementation of the *Oceans Act* in collaboration with other federal departments and agencies, provincial and territorial governments, Aboriginal organizations, coastal communities and other stakeholders and interested Canadians. The sustainable development of Canada's oceans is being implemented through several programs, including Marine Protected Areas (MPAs), Integrated Management (IM) and Marine Environmental Quality (MEQ). These programs form the backbone of the national Oceans Management Strategy, together with horizontal

initiatives such as the National Programme of Action* for the Protection of the Marine Environment from Land-based Activities (NPA).

- **Conservation and sustainable fisheries** through development of new policy frameworks such as *A New Direction for Canada's Pacific Salmon Fisheries*, the *Wild Salmon Policy Discussion Paper* and the Atlantic Fisheries Policy Review.
- **Increased stakeholder responsibility and shared stewardship** through support for industry implementation of the *Canadian Code of Conduct for Responsible Fishing Operations*.
- **Sustainable fisheries and protection of fisheries habitat** through selective harvesting technology projects and training programs in cooperation with industry, DFO and provincial governments. DFO's *Methodology Manual: Measurement of Fishing Gear Selectivity* to facilitate reporting on selectivity indicators and comparative fishing research is one example. Another is the Responsible Fishing Technology Network, a partnership of DFO and the Memorial University of Newfoundland, which supports collaborative research projects with industry participation.
- **Improved boating safety in Canada** through introduction by the Canadian Coast Guard of amended and new regulations following extensive consultations with stakeholders. The new regulations include a mandatory competency program and came into effect on April 1, 1999.

* See Glossary at Annex 3.

- **Improved maritime safety** through investment in technology management to deliver timely data and information to stakeholders. For example, in partnership with Canada Economic Development and St. Lawrence Vision 2000, the Maurice Lamontagne Institute at Mont-Joli, has created the St. Lawrence Observatory, an Internet based system for rapid access to data on the St. Lawrence ecosystem.
- **International cooperation** and negotiation of international fishing regimes consistent with Canada's domestic conservation objectives. Examples would be the Pacific Salmon Treaty long term agreement and participation in multilateral negotiations to bring into effect the UN Agreement on Management of Straddling Stocks and Highly Migratory Stocks (UNFA).
- **Reduced environmental "footprint" of DFO operations** by defining and following a long-term, step-by-step approach consistent with the ISO 14001 Standard for Environmental Management Systems[†], and launch of an *Environmental Policy for Fisheries and Oceans Operations and an Environmental Management Framework*.
- **Safe, navigable and environmentally sound waterways** through the delivery of services and programs related to navigation, marine communications and vessel traffic services, icebreaking, search and rescue, and environmental response.

A recent example that incorporates several of these program areas is the full implementation, in partnership with Transport Canada, the shipping industry and the international marine community, of the *Electronic Chart and Display Information System** (ECDIS).

- **Protection of the marine environment** through prevention and preparedness. The Canadian Coast Guard Environmental Response program oversees in excess of 250 spill cleanup operations annually. The program also provides support and expertise for disasters such as the crash of Swiss Air 111 and the 1997 Red River Flood. In addition to its domestic role, the Environmental Response program responds to international requests for assistance through the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC)*.
- Marine safety and environmental protection in ship and fleet management by strengthening and enhancing Fleet Safety Manual procedures and accountabilities for ship operations with significant environmental aspects through the Document of Compliance and Safety Management Certificates issued to shore offices and the Coast Guard Fleet pursuant to the *International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code)*.

[†] International Organization for Standardization: Standard 14001 specifies elements of an effective environmental management system (EMS) for organizations and is but one component of the ISO series of standards. See Glossary at Annex 3.

* See Glossary at Annex 3.



Lessons Learned from the 1997 Strategy

Through an internal self-assessment, DFO learned some lessons relating to the gap between sustainable development commitments made in 1997 and results achieved to date. We learned that our 1997 commitments were repetitive or worded too broadly, making the achievement of specific outcomes difficult to determine. The planned outcomes in the 1997 Sustainable Development Strategy were not always clear or measurable, a key weakness identified by the Commissioner for almost all federal departments. As well, commitments were too numerous and not linked clearly to each other or the departmental business plans. While DFO did achieve many important sustainable development results since 1997, it is not clear that this performance stemmed from a committed focus on implementation of DFO's first Sustainable Development Strategy.

The internal assessment confirmed the findings of the Commissioner for Environment and Sustainable Development during an audit in the fall of 1999 of

implementation of DFO's 1997 Sustainable Development Strategy. The audit indicated that, with the exception of the environmental management policy and system for DFO operations, most functional areas of DFO had not instituted a management systems approach to implementation of its sustainable development planned outcomes. To achieve consistency with the ISO 14001 standard being used by the Commissioner, DFO's new Sustainable Development Strategy will have to include a management or tracking system to help identify if and why planned outcomes are not met and to provide for management review and corrective action as necessary. The audit also disclosed a need for training and capacity building among DFO staff and managers and a requirement for improved documentation.

In *Moving Up the Learning Curve*, the Commissioner highlights the challenges of moving from plans to actions, noting, "We need to close that gap – not by lowering our expectations but by strengthening our performance." While DFO's sustainable development performance since 1997 has in practice been good, mechanisms and processes to track progress and to document and demonstrate performance will have to be features of DFO's new Sustainable Development Strategy.

DFO and its Environment Today

DFO has undergone significant changes since the first Sustainable Development Strategy was tabled in Parliament in 1997. A dynamic, changeable working environment remains a constant for DFO. The shock in the early 1990s of the collapse of commercial groundfish fisheries was undoubtedly one signal of the need for a new approach to fisheries conservation. The year 1995 marked the merger of DFO with the Canadian Coast Guard, which expanded DFO's legal mandate to include the *Navigable Waters Protection Act* and shared administration of other statutes with Transport Canada. DFO's mandate was further expanded in 1997 when the *Oceans Act* came into effect, assigning the Department responsibility to lead federal activities relating to oceans, and providing new policy and program tools aimed at conservation and sustainable development of Canada's oceans resources. Program review aimed at resolving government-wide deficit problems began in 1995, prompting an examination of DFO's core responsibilities and options for doing things differently. Consumers are tending more frequently to expect eco-labelling and certification that products have been sourced from sustainable fisheries. Emerging and expanding oceans industries and uses such as hydrocarbon exploration and production, routing of submarine fibre-optic cables and methane hydrate research are intensifying the challenge of conservation and sustainable management of marine resources. These emerging uses highlight the need to find new regulatory and other tools and processes to reduce the risk of adverse impact on the aquatic environment and to protect the interests of all users.

Changes to DFO's legal mandate and policy framework have expanded the department's client or stakeholder population as well. Harvesters' organizations, Aboriginal groups, harbour authorities and the fish processing and marketing industry continue to play an active role. However, these groups have been joined by others representing environmentalists, cruise ship and eco-tourism operators, members of the aquaculture industry and the forest products industry, municipalities and community groups, anglers and boaters, and oil, gas and mineral extraction companies, to name a few.

The legal landscape with respect to DFO's Aboriginal stakeholders has particularly changed. Section 35 of the *Constitution Act, 1982* recognizes and affirms the existing aboriginal and treaty rights of the Aboriginal peoples of Canada. Several court cases in recent years have helped to refine the meaning of aboriginal rights in the fisheries resource context. Along with evolving development in the law, the importance of the natural environment, including fisheries resources, in the culture and traditions of the Aboriginal peoples of Canada is increasingly recognized and reflected in federal policy and programs. Aboriginal groups increasingly expect a more prominent role in the decision-making and policy-making processes with respect to sustainable use of natural resources and the environment, including fish resources. The federal government's policy on self-government for Aboriginal groups will continue to enhance the role of Aboriginal communities in these processes.

Adjusting to these changes in both its structure and its operating environment has been accelerating in DFO since 1997. For the past two years, the Department has been engaged in a profound examination of its culture, values and governance to produce a new Strategic Plan, “Moving Forward with Confidence and Credibility”, and a new Vision Statement. Development of the Plan began in 1998 to address the department’s need for future direction, to break down barriers to change, both internal and external, and to give both the Department and its stakeholders a sense of cohesion and purpose. The new Vision Statement aims similarly at defining the Department and its overall purpose to members of the Department, its stakeholders and the general public. DFO has also sought to establish a framework for more collaborative relations with its provincial and territorial counterparts through the 1999 Agreement on Inter-jurisdictional Cooperation and the Canadian Council of Fisheries and Aquaculture Ministers* (CCFAM). These instruments are grounded in the principles of sustainable development and their ultimate aim is to help DFO to meet its mandate to Parliament and the people of Canada.

A comprehensive environmental scan, concluded in February 1999 during preparation of the new Strategic Plan, identified a variety of major political and socio-economic forces shaping the context within which DFO must now work:

- globalization and technological change;
- tension between protecting the environment and economic growth;

- calls for increased scientific knowledge about nature, in particular about the inter-dependence of ecosystems and the impact of climate change; and
- increased demand by the public for access to information on which decisions are based.

Certain conclusions can be drawn from the sketch of major external drivers of change for DFO. These are:

- Canadians want to be more directly involved in decision-making;
- with continued economic growth, Canadians will become more concerned with environmental issues; and
- federal government priorities are shifting away from deficit reduction and toward quality of life, knowledge-based economy and competitiveness.

DFO’s new sustainable development strategy will have to take into account these new challenges and expectations.

Integrating Sustainable Development into the DFO Policy Framework

A policy statement to guide the actions of departmental managers and employees is an important first step in expressing DFO’s commitment to sustainable development. Articulating that commitment in a public policy statement is consistent moreover with the ISO 14001 standard for environmental management systems advocated by the CESD. Such a policy statement will also support integration of the sustainable development commitments into the departmental

* See Glossary at Annex 3.



Strategic Plan and the business planning and management framework.

DFO's new policy on sustainable development is:

SUSTAINABLE DEVELOPMENT POLICY FISHERIES AND OCEANS CANADA

- 1. The Department of Fisheries and Oceans is committed to sustainable development and undertakes to integrate economic, environmental and social considerations in the decisions it makes in carrying out its legal mandate, its policies and programs and its day-to-day operations.**
- 2. The Department's commitment to sustainable development is based on the Department's Vision: *safe, healthy, productive waters and aquatic ecosystems, for the benefit of present and future generations of Canadians, by maintaining the highest possible standards: of service to Canadians; of marine safety and environmental protection; of scientific excellence; and of conservation and sustainable resource use.***
- 3. The Department is committed to continuous learning in its contribution to sustainable development and will monitor this commitment by reviewing progress toward its sustainable development goals on a regular basis and by taking corrective action as appropriate.**

Principles for Working toward Sustainable Development

Principles that will help to guide application of the sustainable development policy include:

INTEGRATED DECISION-MAKING:

Integrated decision-making recognizes that decisions aimed at sustainable development:

- have **a long term focus** that seeks to preserve and enhance economic, social and natural capital in order to sustain aquatic species and to improve the quality of people's lives and ensure continuing benefits for future generations;
- take a **horizontal perspective that incorporates** economic, environmental and social aspects;
- feature **an ecosystem approach**; and
- accept **shared responsibility** and commit to **transparency and communication** of how and why decisions were made.

ACCOUNTABILITY:

The Department will accept and define its accountability for its role in supporting sustainable development. This means that the Sustainable Development Strategy will:

- develop a management system to **review performance against commitments** at regular intervals and thereby to document progress and the need for corrective action as necessary to ensure **continuous improvement**;

- 
- determine the specific real world expected outcomes to be achieved, in a way that is **measurable and time-bound**;
 - define a reporting framework that is committed to and supportive of consultative and **transparent operations and decision-making**;
 - **set an example** as a way of encouraging and influencing clients, stakeholders and partners to support decisions aimed at sustainable development;
 - outline the Department's accountability in its operational activities for **compliance**, for instance, with standards and requirements for fishing activities, environmental protection and prevention of pollution; and
 - reaffirm a **commitment to partnership** in our relations not only with our private sector stakeholders and members of the public but also with other federal government departments, other levels of government and Aboriginal groups.

SCIENCE AND KNOWLEDGE

The Department understands the essential knowledge provided by science and the critical role that knowledge and understanding play in making decisions that are sustainable over time. Therefore, as a basis for its decisions, the Department will:

- be guided by a **precautionary approach** and risk analysis, recognizing the limitations of our understanding of oceans related sciences;
- provide **timely, reliable and best available scientific knowledge**, understanding and advice on key aquatic resources and ecosystems;
- complement and integrate scientific knowledge and understanding with **community and traditional knowledge**; and
- integrate and share information and data to enhance cost-effective decisions based on **anticipation and prevention of problems**, in part through conducting environmental assessments of policies, plans and programs in accordance with the 1999 Cabinet Directive.



Sustainable Development Strategy: Action Plan

DFO's potential impact on sustainable development is extensive. The first Sustainable Development Strategy reflected the broad reach of DFO's mandate but was less effective than it might have been as a result of trying to do too much. Our intention, in pursuing a more selective approach for our second strategy, is to build on the strategic directions of the first strategy but to target our efforts toward the future and to areas where we can be most effective. Our plan is to work internally and with partners to build awareness and capacity and to gain experience that will develop a solid basis for continuous learning over the next three years and beyond.

A more selective focus in the new Sustainable Development Strategy will not limit ongoing work within the Department on other programs, policies and operations that clearly have sustainable development impacts. As noted previously, sustainable development is firmly imbedded in DFO's mandate and all its policies, programs and activities. However, the objectives and priorities of the new Strategic Plan are DFO's *change agenda*, guiding the Department toward the future and improved delivery of its mandate to Parliament and the people of Canada. Likewise, DFO's sustainable development goals for 2001-2003 will be oriented to *change*, confirming and continuing the new strategic directions for the Department that will move us most effectively toward making a difference to the Government's sustainable development goals. The Strategic Plan and the new Sustainable Development Strategy will move forward together during their overlapping terms, on the basis of commitments to certain con-

crete, measurable and time-bound target outcomes or planned activities that they will have in common.

The following text outlines the proposed goals, objectives, expected outcomes and planned activities that DFO proposes as its sustainable development goals during 2001 through 2003. The sections of the Action Plan are presented under the relevant themes that were identified in the earlier Discussion Paper. Tables of the full Action Plan are found at Annex 1.

A brief explanation of the terminology used in this document may be useful. **Goals** are long term, strategic and high level. They establish an overall sense of direction and scope. **Objectives** are also long term and comprehensive but constitute intermediate steps in the direction of goals. The term **Expected or Target Outcomes (henceforth, outcome)** is used here to mean the result we are seeking or the specific area of action we intend to focus on. The column headed **Planned Activities** identifies what we intend to do, deliver or produce. **Performance Measures** are used to measure progress on both outputs and outcomes, although at this point they are difficult to identify and differentiate. The performance measures and indicators identified in this draft Strategy are preliminary in nature. Further work will be necessary to consolidate a Performance Management Framework for the new Strategy. **Sustainable Development Impacts** refers to the ultimate outcome, the long term results or effects of outputs. The term has been used here to indicate the high level, positive effects on sustainable development that we hope will follow from our planned outputs.



Theme One: New Forms of Governance and Shared Stewardship

Sustainable development has been described as first and foremost about what kind of world we want to leave to our children and their children. How are we to use the resources available to us so that succeeding generations and our global neighbours will also have resources available for their use? The underlying assumption is one of integration among generations, across geography and among sectors of society. Government may lead and support but the responsibility is shared by all. Traditional divisions or “stovepipes” – between the global versus the local, for instance, or the competing claims of the economic versus those of the environment or the social and cultural – are no longer valid bases for decision-making. The concept of sustainable development promotes integration, achieved through a new way of making decisions that seeks to recognize the complex inter-relationships within and between aspects traditionally characterized as the environmental, the economic and the social or cultural. Integrated decision making also recognizes the need to involve all who will be affected by a decision – those who agree and those who do not – and who will therefore participate in

implementing it. Such an approach to making decisions constitutes a profound commitment to change on the part of both government and society alike. The changing expectations of both government and society will have to be embodied in new forms of governance or decision-making relationships between both sides.

Although a challenge, public expectations of greater involvement and sharing of responsibility for decisions are increasingly a force for change in management and use of aquatic resources and environments. The trend is fed by new technologies that enhance citizen awareness and ability to participate in decision-making. New forms of governance are also inspired by the need to find more effective, less costly ways of delivering government services and programs.

Action Plan

The following graphic sets out the proposed goal, objective and four expected outcomes that DFO will seek under the theme of New Forms of Governance and Shared Stewardship. Text follows on each expected outcome to indicate and comment on the actions that will be undertaken to try to achieve it.



Improved stakeholder involvement in shared stewardship of estuarine, coastal and marine ecosystems and resources (Outcome 1.1.1):

will mean adopting forums and processes that facilitate collaboration and shared decision-making between federal government departments, the provinces and territories, aboriginal organizations, coastal communities and oceans stakeholders. An integral part of the process with these partners will be to develop a national policy framework for oceans governance. Oceans Management Strategy Demonstration Projects will be tested and validated in

at least 3 coastal regions: the Western Arctic, the Gulf of St. Lawrence and the Eastern Scotian Shelf. The results of these projects will be used to develop a policy framework and an action plan for implementation by end of 2003. Recommendations toward a national approach for oceans governance will recognize unique regional characteristics and will be informed and supported by other key governance initiatives including the Minister's Advisory Council on Oceans and area-based program delivery. These integrated management initiatives will aim to build stakeholder capacity through engagement and



participation, information sharing and education. Each initiative will seek to balance environmental, economic and social goals for sustainable development and manage the increasing complexity and diversity of oceans use.

Increased stakeholder involvement in delivery of marine services (Outcome 1.1.2): will require the Canadian Coast Guard (CCG) to initiate and test new partnerships with private and voluntary sector stakeholders in delivery of marine services. The CCG will seek to enhance voluntary sector involvement in delivery of marine safety programs and services. It will also investigate ways to deliver, install and maintain aids to navigation with new partners. It will be essential to clarify accountabilities, through consultations with stakeholders, and to develop service standards and examine service options. The aim will be to enhance CCG's leadership and risk management role in the management and protection of Canada's oceans and other navigable waterways, although the CCG will continue to deliver directly a number of essential services. The Coast Guard also plans to focus on modernizing the *Navigable Waters Protection Act* and, in conjunction with Transport Canada, the *Canada Shipping Act*. Greater involvement by stakeholders in delivery of marine services is aimed at broadening awareness of the environmental aspects of marine shipping industries, improved marine safety and decreased risk of environmental degradation.

Expanded arrangements for DFO and stakeholders to work together to achieve mutual fisheries management objectives

(Outcome 1.1.3): will mean expanding the use of co-management arrangements with one or two fisheries plans per year adopting the co-management model, with a goal of up to 25 co-managed fisheries by end of 2003. To do this, DFO will need to review the legislative framework to enable stakeholders to take part in long term allocation decisions. We will also maintain all current Joint Project Agreements* (JPAs) and renegotiate and renew expired JPAs. Operational Integrated Fish Management Plans* (IFMP) guidelines will be revised to include links to objectives-based fisheries management by end of 2001 (see Outcome 2B.2.1) and a co-management tracking system will be developed. Consultations with clients and stakeholders will continue on development and implementation of the overall approach to co-management arrangements. The key objective is more stable fisheries. Increased involvement by participants should also promote increased responsibility for management decisions and the long-term health of fish stocks and ecosystems.

Through the Aboriginal Fisheries Strategy (AFS)*, Aboriginal groups are provided with access to fisheries, for food, social and ceremonial purposes, and in many cases, also for commercial fishing. The AFS is also a vehicle for increasing participation of Aboriginal groups in management of the fishery and

* See Glossary at Annex 3.

for providing them with financial support to build capacity to carry out management functions effectively. DFO is also responding to the Supreme Court *Marshall* decision, which upheld the treaty right of the Mi'kmaq and Maliseet First Nations in the Maritimes and Gaspé to fish commercially towards a "moderate livelihood", by facilitating their access to the commercial fishery and necessary training. The role of First Nations in management of fisheries in which they participate will continue to evolve and expand through efforts of the federal government to address the *Marshall* decision and Aboriginal aspirations generally. As a contributor to these federal initiatives, DFO's objective is to support an increased role for First Nations as well as other stakeholders. Co-operative management measures for Aboriginal groups' fisheries will be integrated with those applicable to other users to ensure effective and sustainable management of fisheries.

Enhanced involvement of stakeholders in delivery of fish habitat management program (Outcome 1.1.4): will mean involving industry, community groups, government agencies and Aboriginal groups in the protection and enhancement of fish habitat. Such groups have been involved in British Columbia partly through the Habitat Restoration and Salmon Enhancement Program. Through the Aboriginal Fisheries Strategy, DFO has also instituted arrangements whereby Aboriginal groups in some areas carry out habitat functions such as habitat

assessment and enhancement. Under an initiative known as "the Blueprint", DFO plans to enhance and broaden such proactive activities to build the foundation for a more consistent, credible and comprehensive national Habitat Management Program (HMP).

In the short term, DFO will look at ways to streamline the habitat referral process by, for example, working with proponents early in the planning stages of development of project proposals and through the development of useful and nationally-consistent guidelines and tools for habitat management staff. The HMP may be further strengthened through initiatives following from the Five-Year Review of the *Canadian Environmental Assessment Act* (CEAA); from the Sustainable Aquaculture Program; from programs to protect species at risk; and from the Habitat Stewardship Program. Over the longer term, implementing the Blueprint initiative will mean focusing a larger part of the HMP activities on implementing the proactive elements of the *1986 Policy for the Management of Fish Habitat*. Promoting shared stewardship and responsibility – by all Canadians – for the conservation, restoration and development of fish habitats has been captured under a newly coined slogan, "Fish Habitat Management is Everyone's Business." Enhancing shared stewardship will involve various activities: working with community groups; participating in multi-stakeholder processes primarily



engaged in integrated resource planning and watershed management; developing new partnerships and governance arrangements with the provinces, territories and Aboriginal groups as well as a variety of groups from non-governmental and voluntary organizations and industry; providing technical and scientific expertise as required, staff training and development; and increasing public awareness of threats to fish habitat and how to prevent habitat loss. Engaging Canadians in proactive stewardship activities is aimed at helping to protect fish habitat from harmful alteration, disruption or destruction and to build an environment that provides for healthy and abundant fish populations.

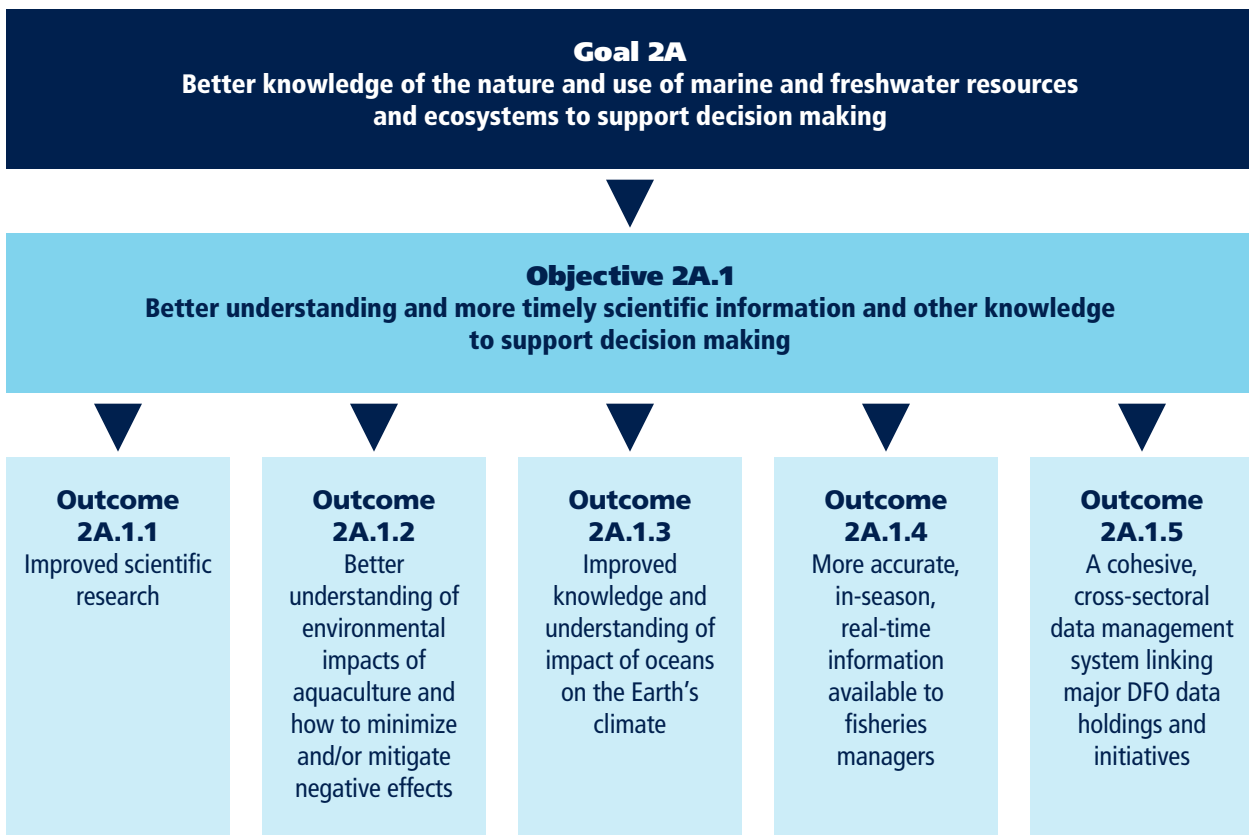
Theme Two: Knowledge and Technology for Sustainable Development

At the Leaders' Forum on Sustainable Development, facilitated by the National Roundtable on the Economy and the Environment (NRTEE) in Ottawa in April 2000, knowledge was recognized as potentially "the fourth dimension" of sustainable development, adding to the classic three pillars of economic, environmental and social aspects. The need for knowledge and mastery of new technologies is increasingly being characterized as an essential need, not only to support the mandate of the federal government but

also to enhance the viability and global competitiveness of the Canadian economy and society. As a major producer and user of both knowledge and technologies, DFO clearly has an interest in their use on behalf of sustainable development. DFO is also a policy department, often leading the way globally, for example, in devising new ways to manage fisheries resources, to respond to oil spills, to protect and restore fish habitat or to understand the role of oceans in global climate change. Adapting quickly to increasing complexity and inter-dependence in a dynamic operating environment is increasing the need for new research, finding new ways of organizing knowledge and breaking down current institutional and jurisdictional barriers to its communication, identifying new sources and different types of knowledge and developing and using new technologies.

Action Plan – Goal 2A

The Action Plan under the theme of Knowledge and Technology for Sustainable Development includes two goals. Goal 2A is an effort to express the need to build and create new knowledge and ways of understanding or predicting the impacts of our decisions.



Objective 2A.1 is aimed at improving the quality and comprehensiveness of our knowledge and understanding and making sure that decision-makers have the best possible information available to them when they need it.

Improved scientific research (Outcome 2A.1.1): DFO plans to address this outcome in various ways. One step will be to develop an **operational frame-**

work for incorporating ecosystem considerations into fisheries and oceans management. This will require defining practical approaches and timing for applying the principles of the *Oceans Act* to current single species management and planning practices. Ecosystems objectives, relating for instance to biodiversity or habitat productivity, will have to be defined, in consultation with other regulatory agencies and

stakeholders, including Aboriginal groups, along with indicators and reference points for each objective in an Ocean Management Area. Practical ways to put into effect or operationalize the precautionary approach are also being identified and tested.

Creating a **national network of multidisciplinary teams** by end of 2001 will enable access to a mix of socio-economic and scientific expertise (e.g., biology, ecology, oceanography) from a variety of private and public sector institutions (e.g., federal laboratories, academia, private industry). Multidisciplinary teams could also include holders of traditional ecological knowledge. This network will involve DFO scientists in efforts to increase the level of university partnering; to develop and implement a communications strategy for the promotion of oceans management and scientific research domestically and internationally; to host a series of international, national and thematic conferences to share information; and to develop a web page and internet directory. To the extent possible, DFO scientists will collaborate with their provincial counterparts, for example, in accordance with the 1998 Prairies Research Agreement on freshwater fisheries science activities.

A third project will be to move toward a **new way to assess the state and health of fisheries resources**. This will involve a fundamental analysis of the existing stock assessment process, identification

of possible changes and recommendation of a new approach by end of 2001. The steps planned to complete the Stock Assessment Review include: integrate the precautionary approach; consider scenarios to classify the status of species at risk; consider multi-species and ecosystem-type approaches; consider strategic alliances and leveraging with industry and academia; and consider the use of new technologies (i.e. hydroacoustics). DFO will also need to identify areas of potential reallocation of research resources and areas where investment is required, and to assess the impact of changes. DFO will also seek to complement science with local community and traditional ecological knowledge. Finally, recommendations and an action plan will be developed.

The potential sustainable development impacts of these activities are significant. One benefit could be more finely tuned fisheries management, including faster responses to changes in health or abundance indicators, for better as well as worse. Better understanding of ecosystems and linkages within them could also result in improved protection for species at risk and maintenance of biodiversity. More sensitive use and management of fisheries resources in the short term should contribute to more sustainable and efficient use over the long term. The involvement of other levels of government and stakeholders should bring to bear better information and a shared sense of responsibility among all users and regulators. Promoting exchanges of information among public



and private sector oceans experts should contribute to international understanding of the oceans and foster creativity and innovation.

Better understanding of environmental impacts of aquaculture and how to minimize and/or mitigate negative effects (Outcome 2A.1.2): will involve increasing DFO's research to support economically and environmentally sustainable development of the aquaculture industry by end of 2001. This will involve development of a multi-disciplinary Research & Development strategic approach for aquaculture, coordination with other strategies with aquaculture components and linking research plans with the knowledge requirements of decision-makers. DFO will also need to build a network of scientific expertise including DFO, other federal Departments, universities, provinces, members of the aquaculture industry and other stakeholders. It will also be important to communicate the knowledge acquired to increase public awareness and confidence of the products and performance of the Canadian aquaculture industry. The sustainable development benefits sought will be a more viable aquaculture industry in Canada, which operates at a high level of environmental performance and thus enjoys greater public confidence.

Improved knowledge and understanding of the oceans' impact on the Earth's climate (Outcome 2A.1.3): will be pursued through support for the Argo Program*. The Argo Program is an international effort to understand global climate, and involves the deployment of oceanographic floats worldwide to obtain a range of oceanographic data. As part of Canada's commitment to Argo, DFO plans to deploy up to 50 floats over the next three years in the northeast Pacific and in the northwest Atlantic. DFO will continue to contribute to Canada's deployment of oceanographic floats in world oceans throughout the duration of the Argo program (until 2006). As part of a Canadian initiative, DFO, in collaboration with Environment Canada, Natural Resources Canada and the Department of National Defence, anticipates the purchase and deployment through the Climate Change Action Fund* (CCAF), of up to another 40 floats by end of 2003. DFO scientists will collaborate with their national and international partners in assimilating global oceanographic data transmitted from the floats via the Global Communication System. Steps will be taken to share and disseminate the data via the web in "near-real" time. This project will bring DFO into collaboration with Canadian and international partners toward better understanding of the oceans/atmosphere climate system and the role of oceanographic factors in global climate change.

* See Glossary at Annex 3.



More accurate, in-season and real-time fisheries information available to fisheries managers

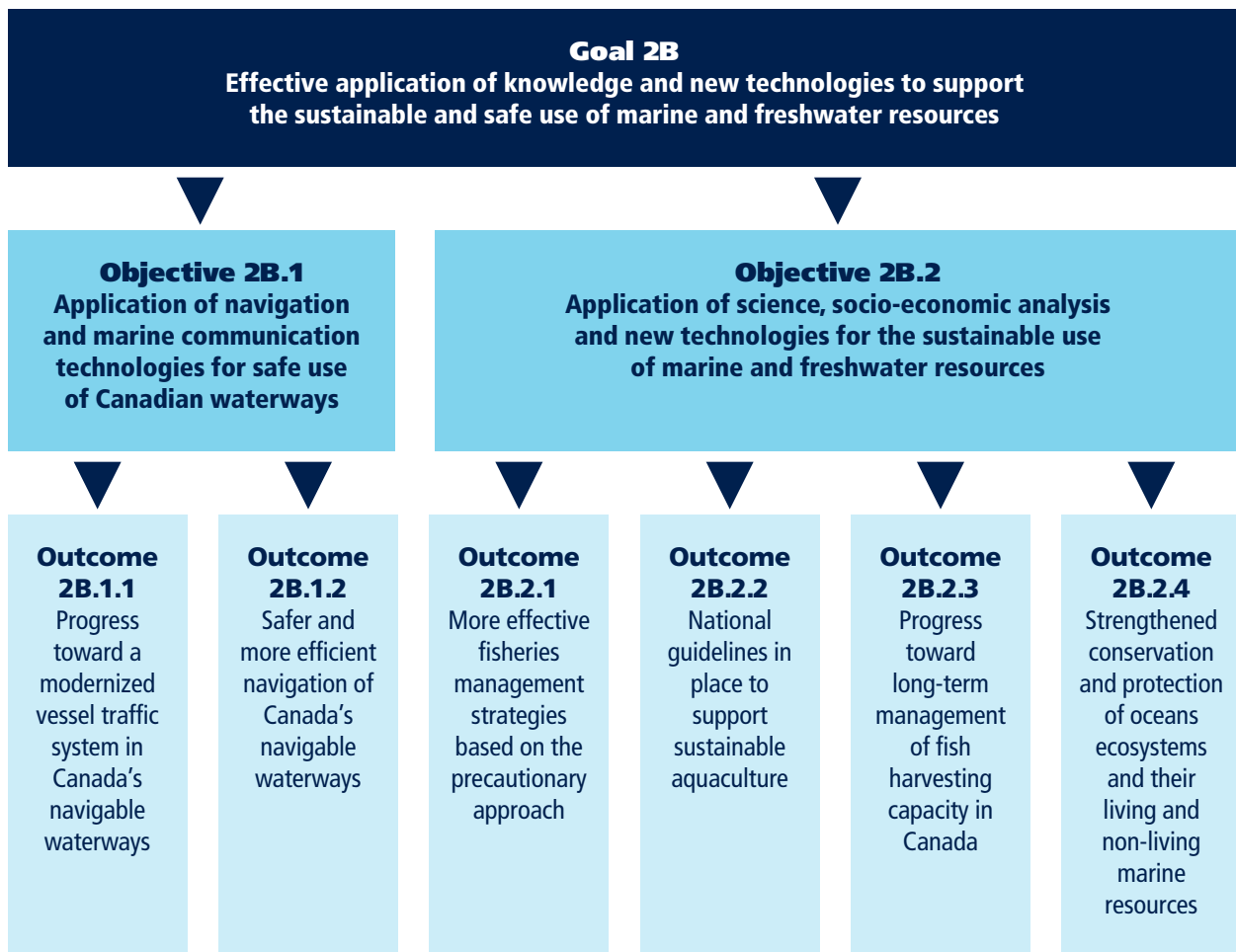
(Outcome 2A.1.4): The key action planned is to develop a harmonized Fisheries Information Management database with online access through a common window by end of 2003. A harmonized database will require an action plan to implement the Fisheries Information Management Project and to establish objective, standardized codes accessible to all DFO fisheries managers. The database will be designed in collaboration with Sectors and Regions, to avoid duplication of effort, maximize return on investment, and ensure that systems are client-oriented, compatible, efficient, and sustainable. More sustainable fisheries are the intended sustainable development benefit.

A cohesive cross-sectoral data management system linking major DFO data holdings and initiatives (Outcome 2A.1.5): This project will identify gaps in current data holdings and problems of access to data, which currently inhibit analysis and decision-making within the Department as well as information accessibility both internally and externally. This will involve horizontal monitoring of departmental data management initiatives, to ensure that linkages between the various data sources are considered and that cross-sectoral requirements are addressed.

This cross-sectoral integration is particularly important in order to facilitate analysis and reporting on “horizontal” programs such as sustainable development. Three phases are proposed, starting in 2000-2001. The assessment phase (year 1), will include: building an inventory of the major data collections; identifying gaps and discontinuities in data collections; identifying definitional and other conflicts in the use of this data; identifying problems in ease of access and reporting nationally; and setting the priorities for addressing the problems and requirements identified. In year 2, options will be evaluated and solutions to provide an integrated data management system will be designed and tested. The system will be implemented in year 3.

Action Plan: Goal 2B

The second goal under the Knowledge and Technology theme articulates the need to improve the availability and application of knowledge and understanding and to make use of new technologies to maintain or improve safe and sustainable use of Canada's aquatic resources.



Objective 2B.1 aims to focus on how we can apply existing and new technologies, or to foster development of new technologies, to improve the safety, economic competitiveness and environmental performance of vessels moving through marine and freshwater waterways under Canada's jurisdiction.

Progress toward a modernized vessel traffic system in Canada's navigable waterways (Outcome 2B.1.1): will be initially directed at fundamental changes to the present vessel traffic system. The intention is to have a modernized system, within the next 10-15 years, which will use up-to-date



technology for enhanced surveillance and tracking of vessels in Canadian waters. The first step will be to develop a long-term action plan and identify the associated resources. Other early action initiatives include the implementation of an Automatic Identification System* (AIS); negotiations for international standards; consultations with stakeholders for client acceptance of a new system; and promotion of the benefits of the AIS to users.

Safer and more efficient navigation in Canada's navigable waterways (Outcome 2B.1.2): will involve conversion of 600 Canadian Hydrographic Services* (CHS) charts to electronic form by end of 2003. This will be accomplished in steps: 490 Electronic Navigational Charts (ENCs) converted by March 2001; another 50 converted by the following year (a total of 550); and another 50 converted in 2002-03 (for a total of 600). The primary sustainable development impact of this undertaking will be safer and more reliable navigation in the short term despite increased vessel traffic in Canadian waters. Prevention or mitigation of pollution incidents is also an anticipated result.

Objective 2B.2 is aimed at using knowledge, information and existing and new technologies to promote sustainable use of marine and freshwater resources.

More effective fisheries management strategies based on the precautionary approach (Outcome 2B.2.1): will introduce the precautionary approach into fisheries management decision-making and

operationalize its use. This project has been entitled Objectives-Based Fisheries Management and the key action planned is to put the new approach into effect in 10 pilot fisheries by end of 2003. To implement this plan, DFO will first establish clear and measurable biological co-management and socio-economic Fisheries Management objectives by end of 2001. Following steps will involve identifying a "prototype" fishery and developing and testing a prototype management model. The new approach will then be modified on the basis of lessons learned from the prototype model. Training will be provided to DFO staff and managers. The 10 pilot fisheries will be identified for testing the new approach. Lessons learned will once again be identified. The anticipated result is more sustainable fisheries.

National guidelines in place to support sustainable aquaculture (Outcome 2B.2.2): This expected outcome is a component of an Integrated Aquaculture Action Plan (see also Outcome A.1.2). Implementation of the Plan is now at a very early stage. Development of a national operational policy framework and guidelines is the priority first step. The plan is to develop the framework and guidelines in collaboration with private and public sectors for the aquaculture industry by end of 2001. DFO's next actions will be to establish clear and measurable biological, socio-economic and stewardship objectives for aquaculture by end of 2002; to develop and implement clear performance measurements by end of 2002; and to develop transparent decision-making processes by end of 2002. DFO staff and managers will receive training and lessons learned will be identified and incorporated.

* See Glossary at Annex 3.

The sustainable development goal is a Canadian aquaculture industry that performs well both economically and environmentally, with a high degree of public confidence in its products and practices.

Progress toward long term management of fish harvesting capacity in Canada (Outcome 2B.2.3):

This expected outcome recognizes that excessive fishing capacity is a fundamental cause of unsustainable fisheries around the world. The members of the United Nations Food and Agriculture Organization* (FAO) have endorsed an International Plan of Action for the Management of Fishing Capacity, which calls for the achievement of world-wide efficient, equitable, and transparent management of fishing capacity, preferably by end of 2003, but no later than 2005. Canada has pledged to be among the first countries to implement its portion of the Plan of Action. To fulfil this pledge, DFO will first undertake a preliminary assessment of the national harvesting capacity. This will be accomplished in collaboration with provinces and territories through the CCFAM working group on capacity management. DFO will also support the FAO in establishing an international record of fishing vessels operating in the high seas by the end of 2000. DFO will then aim at completing its National Action Plan to manage fishing capacity, by developing a policy and regulatory framework which facilitates self adjustment by fishing fleets, preferably by end of 2003. Consultations with stakeholders will be held throughout the process.

Strengthened conservation and protection of oceans ecosystems and their living and non-living marine resources (Outcome 2B.2.4):

will be undertaken through designation of at least 5 new Marine Protected Areas (MPAs)* by end of 2002. Based on the lessons learned from the MPA pilot projects that have been initiated to date, the department will revise and finalize the National Framework for Establishing and Managing Marine Protected Areas. A systematic approach will also be developed to identify Marine Protected Areas for the conservation and protection of commercial and non-commercial fisheries resources, including marine mammals and their habitats; endangered or threatened marine species and their habitats; unique habitats; and marine areas of high biodiversity or biological productivity. Other complementary activities will include the establishment of Marine Environmental Quality* (MEQ) guidelines, objectives and criteria, and the operationalization of the precautionary approach and the ecosystem approach to oceans management. An emphasis on stakeholder collaboration in each of these initiatives will ensure that improved conservation and protection of oceans ecosystems will have sustainable environmental, economic and social benefits for Canadians.

* See Glossary at Annex 3.

Theme Three: Sustainable Operations

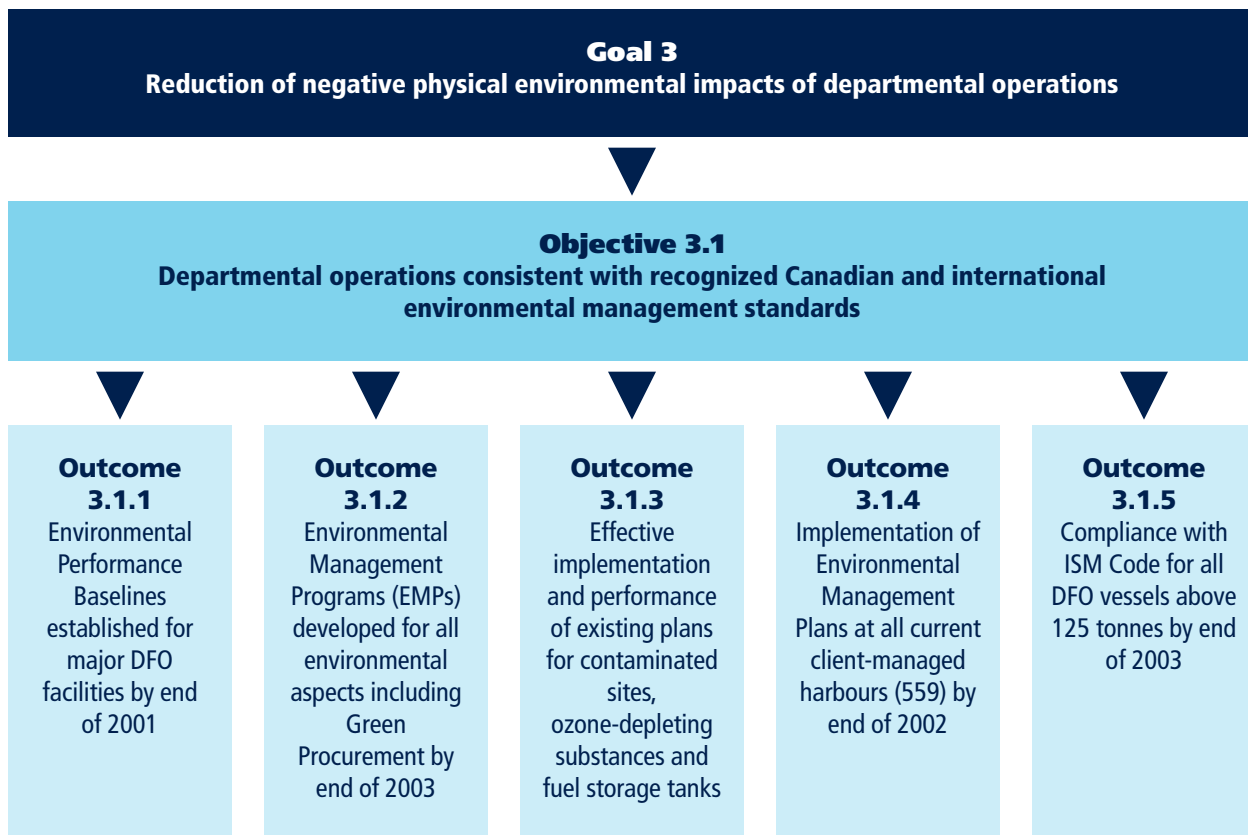
DFO is required to comply in its operations with environmental protection legislation and standards in Canada. DFO occupies buildings and operates vehicles, aircraft, and a very large fleet of ships. DFO also purchases goods and services and can thus influence producers to operate on a sustainable basis. Federal environmental legislation in Canada includes the *Canadian Environmental Protection Act*, the *Canadian Environmental Assessment Act*, environmental provisions of the *Canada Shipping Act* and habitat protection provisions of the *Fisheries Act*. In the Speech from the Throne in October 1999, moreover, the Government undertook to make itself a model of environmental excellence in its own operations.

“Greening operations” was one of DFO’s goals in its first Sustainable Development Strategy and undeniably the most successful, culminating on April 22, 2000 (Earth Day) with the unveiling of DFO’s new Environmental Management Policy and System. Work will continue on reducing the environmental impact of DFO’s operations through implementation of an environmental management system within DFO consistent with the ISO 14001 standard. The Department is also actively contributing to the Federal House in Order Strategy, in collaboration with other

Government Departments, to ensure significant greenhouse gas emission reductions and, in consequence, addressing climate change. In its operations and day-to-day activities, DFO has a significant environmental footprint. In June 1999, DFO identified the following 23 environmental aspects of its operations: contaminated sites, wastewater, fuel handling/storage systems, ozone depleting substances, mercury, hazardous materials/hazardous wastes, spills/releases leaks, batteries, energy consumption, including greenhouse gas emissions (GHG), air emissions, aquatic resource disturbance, dredging, PCBs, asbestos, pesticides and therapeutants, solid non-hazardous waste, storm water effluent, water consumption, resource consumption, terrestrial resource disturbance, archeological/historical/cultural resources, noise emissions and electromagnetics.

Action Plan

Continuing DFO’s efforts to implement the new Environmental Management Policy and System during the second sustainable development strategy will involve the following expected outcomes and actions.



Environmental performance baselines established for major DFO facilities by end of 2001 (Outcome 3.1.1): will involve collection of data from DFO major facilities. DFO will also compile and synthesize environmental performance information into baselines and conduct environmental audits of each major facility. This will help DFO to benchmark its environmental performance in future years.

Environmental management programs (EMPs) developed for all environmental aspects including Green Procurement by end of 2003 (Outcome 3.1.2): will require the following actions: use environmental performance baselines collected for the major facilities to develop greening outcomes and action plans for EMPs, in consultation with stakeholders. The Sustainable Development Strategy will be updated in 2001 to include outcomes developed from baseline data. DFO's share of the Federal House in Order Greenhouse Gas Emission



Reduction Target will be implemented by the Department-wide target from the Energy baseline established by end of 2001.

Effective implementation and performance of existing management plans (Outcome 3.1.3):

will involve actions on three fronts to address issues relating to Contaminated Sites, Ozone-depleting substances and Fuel Storage Tanks.

- *Contaminated Sites*: 800 CCME Phase I assessments and 50 CCME Phase II and/or Phase III assessments completed per year; use a risk management approach to prioritize sites
- *Ozone-depleting Substances (ODS)*: \$250K invested per year for replacing halocarbon in DFO operations with non-ODS substances; identify feasible replacement candidates; complete halocarbon inventory; and populate the Halocarbon Inventory Database.
- *Fuel Storage Tanks*: 100 Fuel storage tank inspections and 50 tank upgrades per year; complete implementation of the Fuel Storage Tank Management Plan; review profile annually to determine departmental liability.

Environmental Management Plans (EMP's) implemented at all current client-managed small craft harbours by end of 2002

(Outcome 3.1.4): will require DFO to sensitize client-managers to the benefits of EMP's and sound environmental practices; consult with Client Managers to mould the EMPs to specific harbour needs; and work with new client-managed harbours to develop EMP's within three years of establishment.

Compliance with the ISM Code for DFO vessels above 125 tonnes by end of 2003 (Outcome 3.1.5):

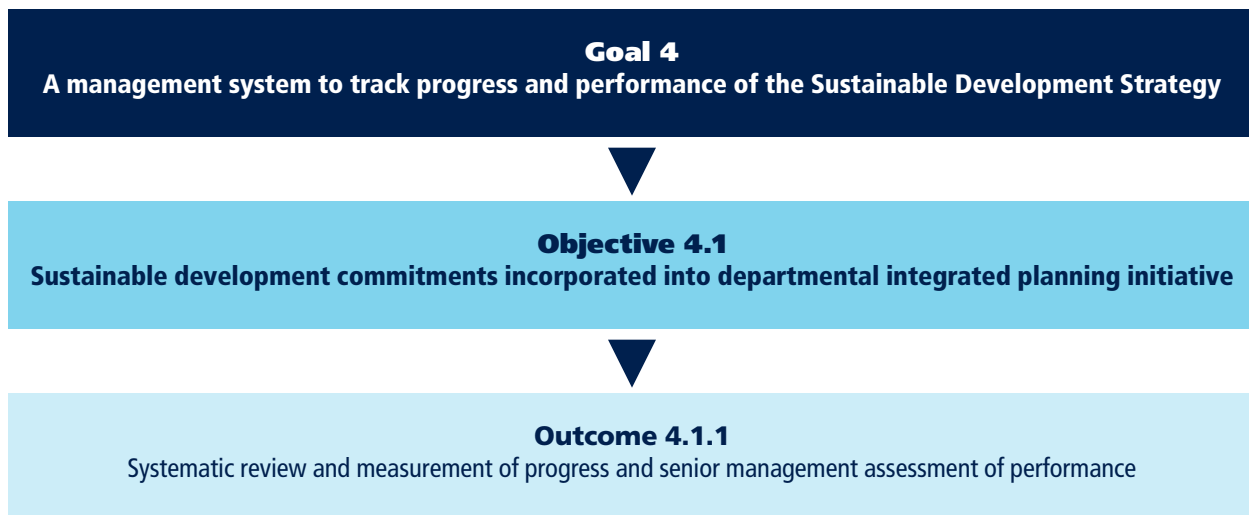
DFO/CCG plans: to ensure that the CCG's onboard Safety Management System meets the requirements of the ISM Code; in partnership with stakeholders, to promote the Safety Management System and identify possible improvements to it; to co-ordinate activities with external auditors from an agency approved by law to issue Documents of Compliance and Safety Management Certificates; and to monitor environmental profile data for all vessels.

**Theme Four:
Managing for Progress
and Performance**

The Commissioner's implementation audit and DFO's internal assessment of its achievements under its first Sustainable Development Strategy demonstrated a need to improve DFO's performance. We are proposing to take steps under our second Sustainable Development Strategy to improve in this respect. Performance assessment of sustainable development goals and outcomes will be part of the new performance measurement system being developed to support public and Parliamentary reporting and to build an organizational culture in DFO in which achievement of results will drive decision-making.

Action Plan

The goal, objective and expected outcome identified for Theme Four is aimed at closing the "implementation gap" in DFO's second strategy.



Systematic review and measurement of progress and senior management assessment of performance (Outcome 4.1.1): will involve integration of sustainable development commitments into departmental performance measurement and business planning and reporting processes. Specific steps will be to develop a performance measurement framework for the department and for business lines; to designate the Sustainable Development Strategy as

a strategic component of the business planning process; to assign accountability for implementing actions to meet expected outcomes; to track and review outcomes regularly; to advise senior managers regularly of results of reviews; to incorporate reports on outcomes and performance in annual reports to Parliament; and to train DFO managers and staff to increase awareness of the Sustainable Development Strategy and its implementation.



Emerging Issues

In developing the proposed Action Plan to implement the second Sustainable Development Strategy, we have tried to be selective and to focus on areas where DFO can be most effective at this moment. However, the evolving environment in which DFO delivers its mandate requires continual consideration of emerging issues.

The highly vulnerable geography of Canada's Arctic has been experiencing growing pressures due to climate change, contaminated sites, persistent organic pollutants and economic development based on non-renewable resource industries, such as diamond mining and oil and gas extraction, increased recreational boating or commercial shipping and ecotourism. We need to apply greater effort to develop solutions. Ignoring current trends could increasingly put at risk human health, economic activity and the social and cultural traditions of the

North. New knowledge will be required to address these issues, in particular of the existing or potential impacts on aquatic resources in the North. DFO's mandate for fisheries and oceans management, for environmental and fish habitat protection and for safe shipping gives rise to the need for new scientific research, to amass evidence and to develop plans of action.

The unintended introduction into Canada's marine and freshwater systems of exotic plant and animal species via vessel ballast water discharges (e.g., zebra mussels and ruffe) is increasingly a concern, which demands further action by DFO and its provincial counterparts. There is a growing need for DFO to work with other Departments to better understand the nature of ballast discharge and the consequences of these introductions and to take regulatory action and leadership to address the problem. Similar concerns are associated with dumping of unwanted aquarium fish and aquarium plants (e.g., fanwort, Asian water millfoil).

Another emerging issue is the need to better understand and map Canada's submerged lands and ecosystems, both along our coasts and in inland areas, such as the Great Lakes. The use of new technologies, like multibeam sonar and laser mapping system, electronic imaging would allow a better understanding of the bathymetry, geology, habitat and biological ecosystems of Canada's underwater physical environment. Such technologies exist now and have been used in a limited way in Canada. The results, however, clearly indicate the immense potential sustainable development benefits for fisheries management, for research, for resource exploration, for safe shipping and communications, and for suggesting solutions to possible conflicts of use. Developing plans to support use of the new technologies will help to establish the basic infrastructure and processes to implement integrated oceans management in accordance with the *Oceans Act*. This is a long term undertaking, of very broad scope and will involve significant collaboration with other partners, especially Natural Resources Canada and the Department of National Defence, as well as commercial users (oil and gas, fishing, cable companies), the marine services industry, university researchers, non-governmental organizations and provincial and territorial governments

Recent years have witnessed a substantial growth in the volume and significance of litigation as Natives seek greater access to natural resources. At the federal level, fisheries have been one of the main targets of litigation efforts. In September 1999, the Supreme Court of Canada, in *R. v. Marshall*, affirmed a 250-year-old treaty right of Mi'kmaq and Maliseet groups to fish, hunt and gather in pursuit of a moderate livelihood. In late 1999, DFO launched Phase 1 of its response to the Marshall decision, designed to provide increased access to commercial fisheries during the 2000-fishing season. This was the first step towards increased Aboriginal access in the fishery, and more needs to be done to implement the Supreme Court decision. Consistent with established practice under the more modest Aboriginal Fishery Strategy, an important part of the *Marshall* response is to provide opportunities to new Aboriginal participants to receive training in a variety of fishing related skills, including sustainable fishing techniques. As First Nations become more involved in commercial fisheries, their role in co-operative management of the fishery will become increasingly important. Building on steps taken to date, DFO is working with Aboriginal groups and existing commercial fishing interest to enable them to assume a greater role in fisheries management.



Cooperation and Coordination with other Federal Departments

DFO works very closely with other departments to encourage cooperation across departmental mandates to address various sustainable development issues. A key link is the “5NR MOU”, involving a 1995 Memorandum of Understanding between five natural resource departments, originally Agriculture and Agri-Food Canada, Environment Canada, Fisheries and Oceans Canada, and Natural Resources Canada, and, since 1998, Health Canada. The MOU encourages collaboration and coordination in applying federal science and technology (S&T) to sustainable development challenges that cut across the departments’ respective mandates. The main strength of the MOU is its ability to bring signatory departments together to address issues of common concern that are either current or emerging. Much of the work under the MOU is undertaken by Working Groups established to address particular S&T issues and to collaborate on production and dissemination of scientific information and expertise.

DFO is also planning to work with other federal partners to support achievement of sustainable development objectives in areas where a partnering approach is required to provide a consistent voice to our stakeholders. For instance, DFO and Transport Canada (TC) will review and revise the provisions of their 1995 Memorandum of Understanding to provide an administrative framework to ensure consistent marine transportation safety and environmental protection. As part of this undertaking, the two

departments will explore development of performance standards for environmentally sound ship operations under the Green Ship Initiative and implementation of regulatory programs to incorporate international agreements on marine pollution deriving from vessels. DFO and TC will also work cooperatively to maintain a National Aerial Surveillance Program to act as a deterrent to potential polluters that transit Canadian waters.

Cooperation across departmental mandates to deliver sustainable development commitments needs more effort however. Eight sustainable development themes have been identified as priorities for coordinated, government-wide sustainable development planning. They constitute a framework for enhanced efforts by federal departments to coordinate their objectives and to cooperate with each other in delivery of their commitments. Of the eight, DFO has targeted four for special attention: 1) sustainable development in the North; 2) sustainable government operations; 3) research, through the Policy Research Initiative, on sustainable development indicators and the federal role in capacity building for sustainability at the community level; and 4) sustainable communities. Each of these four targeted sustainable development themes is discussed below.

Northern Sustainable Development Strategy

As a federal department with a natural resource mandate, DFO has significant sustainable development responsibilities in the three northern Territories. DFO is working with other federal departments, under the leadership of Indian and Northern Affairs Canada (INAC), to develop a federal sustainable development strategy in the North. Two rounds of consultations, in the fall of 1999 and the spring of 2000, have been undertaken with Northern stakeholders and in Northern communities. The consultations identified clearly sustainable development issues of concern at present to Northerners. Some of these touch on DFO's mandated responsibilities, including fish habitat protection and environmental assessments of development projects, scientific research on fisheries and oceans questions, such as climate change, integrated management of oceans resources, and safe shipping.

While DFO's contribution to the northern strategy is still being developed, a major commitment under Goal 1 in this strategy is an oceans integrated management project in the Beaufort Sea in the Western Arctic. Mackenzie Delta communities face the challenge of reconciling protection of a pristine marine environment with oil and gas exploration and development and ecotourism. A federal team, including possibly Environment Canada, NRCan, and INAC will work on this project with Inuvialuit Land Claim organizations, Mackenzie Delta communities and territorial governments over the next three years. As

part of our commitment to developing an Environmental Management System for DFO Operations, nationally-implemented Environmental Initiatives will also occur in the North. These include Contaminated Sites Assessment and Remediation, Baseline Studies and Compliance Audits, Halocarbon and Storage Tank Management. DFO's fish habitat management and protection program will continue. Departmental Arctic science activities, in partnership with Environment Canada and Natural Resources Canada in particular, will contribute to advancing sustainable development in the North.

Sustainable Government Operations

A federal approach to sustainable government operations has been a focus of interdepartmental discussions over the past few years. Under the leadership of Public Works and Government Services Canada, Environment Canada and Natural Resources Canada, federal departments have reached consensus on moving forward together in a number of key areas to reduce the environmental impact of departmental operations. The framework document, entitled *Sustainable Development in Government Operations (SDGO): A Coordinated Approach*, recommends seven priority areas, such as green procurement, waste management, water conservation and wastewater management. To support effective results, sample target outcomes and performance

measures have been developed to support government-wide progress and performance measurability in these areas. DFO has contributed to development of the framework document and also participates in the Performance Measurement for Sustainable Development Operations committee to actively influence the development of performance indicators for greening operations.

DFO's commitments in the draft Sustainable Development Strategy for 2001-2003 incorporate the seven SDGO priority areas but implementation will proceed in accordance with DFO's Environmental Management Framework, which requires DFO to address first the most significant, or highest risk, aspects of its operations. Proceeding on the basis of a risk assessment is consistent with the ISO 14001 environmental management standard.

Policy Research Initiative – Sustainable Development Project

The Sustainable Development Project is part of the federal Policy Research Initiative (PRI). The purpose of the interdepartmental Sustainable Development Project is to improve the federal government capacity to implement sustainable development through conducting and disseminating policy research in collaboration with partners inside and outside the federal government. DFO is one of three federal

departments, along with Environment Canada (EC) and Natural Resources Canada (NRCan), which have championed this initiative. Public distribution of research papers will be accomplished through posting on the PRI Sustainability Project Internet web page. DFO's has chosen to support in particular research projects on: a) Indicators of Sustainable Development: Lessons Learned for Canada; and b) Sustainability at the Community Level.

a) Knowledge and Reporting: Sustainable Development Indicators

The Sustainable Development Indicators project will review and analyze the many national and international approaches to developing interlinked indicators of sustainable development. It will also explore sets of indicators relevant to policy making in Canada. A key objective of the research project is how to move beyond individual sets of indicators (regarding social health, for instance, or economic well-being) toward integrated or interlinked sets of indicators that track simultaneous movement in all three aspects of sustainable development – economic, environmental and social. Complementary work has recently been undertaken, and funded by the federal government, by the National Roundtable on the Environment and the Economy (NRTEE). The aim of the NRTEE project is to develop a set of national indicators of progress toward sustainable development that integrate environmental, social, health and economic considerations that will be used by all public, private and



voluntary sectors throughout Canada. DFO supports such work as critical to enhancing our ability to understand and measure progress and performance in sustainable development in Canada.

b) Sustainability at the Community Level

The purpose of this PRI research project is to clarify the issue of the federal role in building capacity in Canadian communities for sustainable development, to identify best practices and to propose options for a framework to guide future federal government work in this area. The project will focus in particular on rural, northern, Aboriginal, remote and coastal communities, which may have less access than other communities in Canada to the skills, leadership and technology that supports sustainable development. This initiative is important to DFO because many of our departmental stakeholders live in such communities. It also responds to increasing expectations on the part of Canadians that they will be involved in making decisions that will affect them and the communities in which they live and work. In addition to the three PRI champion departments, other federal departments such as Human Resources Development Canada (HRDC), Health Canada and the Rural Secretariat of Agriculture and Agri-foods Canada will contribute to this project.

Sustainable Communities

A great deal of ongoing DFO program delivery by Regional Offices involves working with local communities, in development of fish habitat protection or restoration activities for instance, in support given by Small Craft Harbours to local Harbour Authorities to help them adhere to environmental management standards, or in fisheries diversification initiatives. Significant cooperation between DFO and other federal departments is also fundamental to the establishment of Marine Protected Areas and in implementation of ecosystem initiatives under the leadership of Environment Canada.

Specific projects have also been initiated to test ways to enhance effective co-ordination across departmental mandates and jurisdictions to facilitate support to communities seeking sustainable development objectives. In Nova Scotia, for instance, DFO is one of the champions of the Sustainable Communities Initiative (SCI), which includes about 40 other federal and provincial government departments. The Initiative is aimed at having all levels of government working in a more integrated and collaborative way with each other and with communities to address sustainability issues. Two watersheds in Nova Scotia – Bras d'Or Lakes and the Annapolis River Basin, together with the adjacent Fundy Shore – have been identified as the initial partner community areas. During the first phase, the government departments involved in the

SCI are concentrating on strengthening their own connections and collaboration mechanisms to improve their capacity to deliver their programs and services in a more coordinated and community-centred way. The next step is to formally engage First Nations and municipalities. These two steps will help lay the groundwork for engaging the partner communities. The third phase is to identify solutions to issues and priorities brought forward by the communities themselves. The outcome will be new and evolving governance structures that will provide a more streamlined and effective government response to community needs. This collaborative community based and led planning process should improve the quality of life for citizens.

DFO employees in Regional Offices across Canada are also contributing to Canadian Rural Partnership (CRP) initiatives. This program, with total funding of \$20 million, is in its fourth year and is aimed at testing new ways of responding to rural issues such as the need for better access to financial resources, to

employment opportunities for youth, and better program and service delivery in rural areas. DFO employees have participated in inter-governmental teams that organized rural community development pilot projects and in consultation sessions under the Rural Dialogues program during 1998-1999. The Rural Dialogues consultations took place in rural communities across Canada to identify their challenges, opportunities and priorities and resulted in the Federal Framework for Action in Rural Canada, announced in May 1999.



Conclusion

We have tried in this document to set out clearly the contribution that DFO plans to make toward the Government's sustainable development objectives over the next three years. The commitments in the Action Plan are those for which we are prepared to be held accountable. We have focussed on incremental change and on initiatives where we can be most effective. We have acknowledged the need to develop management systems to encourage continuous learning and effective implementation. Our commitments incorporate the flexibility to introduce new commitments during the term of the Strategy and to adjust those which are not advancing as they should. It is clear, however, that a plan to

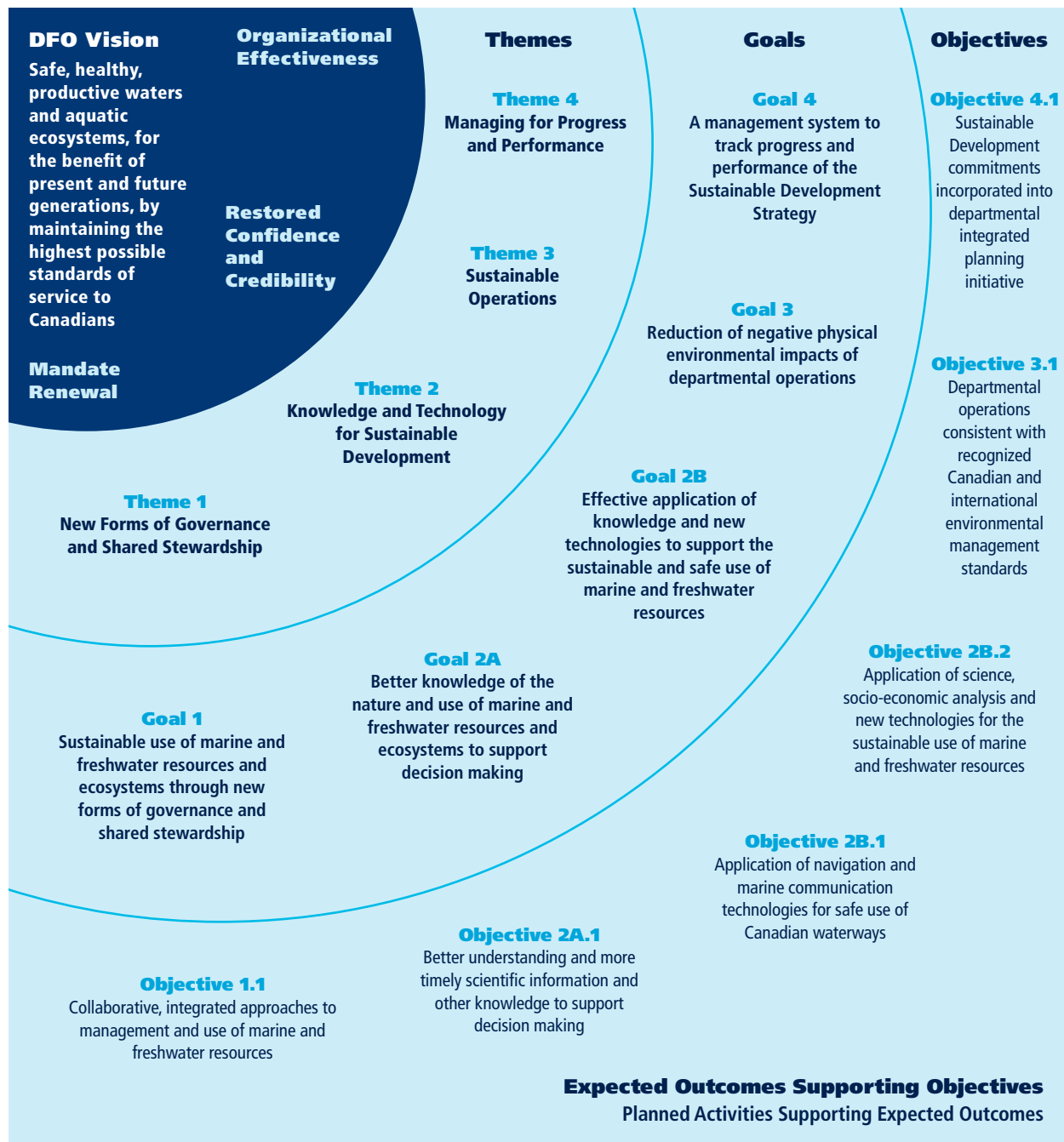
advance sustainable development can never be developed in isolation. DFO's new sustainable development strategy recognizes that successful implementation is a collaborative venture and will depend upon the contributions of many partners and supporters, including other levels of government, Aboriginal groups, stakeholders in the private sector, the volunteer sector, the general public and finally our international partners. Managing and protecting Canada's oceans and freshwater resources is a task of immense importance for Canada's economic prosperity and our quality of life, now and in the future.

Conclusion

5



Annex 1: Action Plan Table, 2001-2003



Annex I: Action Plan Table, 2001-2003

A

Theme: New Forms of Governance and Shared Stewardship

Goal # 1: Sustainable use of marine and freshwater resources and ecosystems through new forms of governance and shared stewardship

Objective 1.1: Collaborative, integrated approaches to management and use of marine and freshwater resources

Expected Outcome	Planned Activities
1.1.1 – Improved stakeholder involvement in shared stewardship of estuarine, coastal and marine ecosystems and resources	<ul style="list-style-type: none"> ■ Develop and implement integrated management plans (IMPs) and complete demonstration projects in three coastal regions by end of 2002: Eastern Scotian Shelf, Western Arctic, and Gulf of St. Lawrence ■ Establish Minister's Advisory Council on Oceans
1.1.2 – Increased stakeholder involvement in delivery of marine services	<ul style="list-style-type: none"> ■ Initiate and test new CCG partnerships with private and voluntary sector stakeholders in delivery of marine services by end of 2003
1.1.3 – Expanded arrangements for DFO and stakeholders to work together to achieve mutual fisheries management objectives	<ul style="list-style-type: none"> ■ Initiate co-management arrangements with 1-2 fisheries plans per year adopting the co-management model, with a goal of up to 25 co-managed fisheries by end of 2003
1.1.4 – Enhanced stakeholder involvement in delivery of fish habitat management program	<ul style="list-style-type: none"> ■ Streamline habitat referral process ■ Support fish habitat restoration and enhancement across Canada through improved partnerships, public education, public awareness, and strategic investments in community capacity to carry out physical projects



Performance Measures/Indicators

- Effectiveness of new oceans governance
- Level of stakeholder participation
- Number/coverage/nature of active and proposed IMPs
- Reach and usage of educational materials and Internet
- Number of new partnerships and alliances created
- Stakeholder support
- Number of fisheries under the co-management model, per year
- Shared enforcement costs
- Improvements in response time to development proposals (i.e., referrals) received and reviewed by DFO in Ontario and the Prairie provinces
- Level of stakeholder participation, including in-kind contributions and leveraged funds applied to habitat conservation, restoration and enhancement initiatives
- An increased level of DFO participation in stewardship partnerships/programs in all parts of Canada which support goals of DFO habitat policy

Ultimate Impacts

- Realization of economic potential and social benefits from oceans
- Improved marine safety
- Decreased risk of environmental pollution
- Increased awareness of environmental aspects by stakeholders
- Increased economic stability among fishery participants, along with greater responsibility for management decisions, reinforcing a commitment towards responsible fishing practices
- Conservation and protection of fish habitat from harmful alteration, disruption or destruction
- Healthy, abundant fish populations

Theme: Knowledge and Technology for Sustainable Development

Goal # 2A: Better knowledge of the nature and use of marine and freshwater resources and ecosystems to support decision making

Objective 2A.1: Better understanding and more timely scientific information and other knowledge to support decision making

Expected Outcome	Planned Activities
2A.1.1 – Improved scientific research	<ul style="list-style-type: none">■ Develop an operational framework for incorporating ecosystem considerations within fisheries and oceans management by end of 2002■ Create a national network of multidisciplinary teams from public and private sectors by end of 2001■ Identify changes to the current stock assessment process and recommend new approach by end of 2001
2A.1.2 – Better understanding of environmental impacts of aquaculture and how to minimize and/or mitigate negative effects	<ul style="list-style-type: none">■ Increase DFO's research on environmental impacts of aquaculture by end of 2001
2A.1.3 – Improved knowledge and understanding of the impact of oceans on the Earth's climate	<ul style="list-style-type: none">■ Support the Argo Program, an international initiative to understand global climate, by deployment of up to 90 oceanographic floats in world oceans by end of 2003



Performance Measures/Indicators

- Better scientific information on biodiversity and species at risk
- Increased exchanges of knowledge among private and public sectors oceans experts and fisheries scientists
- Number of fisheries managed on basis of ecosystem considerations
- Improved public confidence in scientific information and advice to fisheries and oceans managers
- Additional researchers hired
- Research projects launched
- Increased confidence on part of aquaculture industry and other stakeholders
- Increased public confidence in the Canadian aquaculture sector
- Number of floats purchased and deployed
- Data made available to Canadian and global partners
- References in climate change literature

Ultimate Impacts

- Better understanding of ecosystem linkages
- Better information on effect of multi-purpose uses within an aquatic ecosystem
- Involvement of other levels of government and stakeholders
- Effective use of scientific research resources
- Better understanding of oceans
- Research activities and gaps identified
- More timely management response to changes in health of aquatic resources
- More environmentally sustainable and competitive aquaculture industry in Canada
- Reduced risk of adverse environmental degradation or accidents
- Higher public confidence in products and practices of the Canadian aquaculture industry
- Contributing to international knowledge on climate change

Theme: Knowledge and Technology for Sustainable Development

Goal # 2A: Better knowledge of the nature and use of marine and freshwater resources and ecosystems to support decision making

Objective 2A.1: Better understanding and more timely scientific information and other knowledge to support decision making (*continued*)

Expected Outcome	Planned Activities
2A.1.4 – More accurate, in-season, real-time fisheries information available to fisheries managers	<ul style="list-style-type: none">■ Develop a harmonized Fisheries Information Management database with online access through a common window by end of 2003
2A.1.5 – A cohesive, cross-sectoral data management system linking major DFO data holdings and initiatives	<ul style="list-style-type: none">■ Create an inventory of departmental data holdings and data initiatives accessible online to managers, nationally, by end of 2001■ Establish a framework to ensure that data quality and consistency is maintained department-wide by end of 2002■ Electronically link data sources identified as key for decision-making by end of 2003



Performance Measures/Indicators

- % of database harmonized
- Number of standardized codes
- % of database architecture completed
- Sharing of catch and other fisheries information across DFO Regions
- National fisheries data on landings and values of the principal fisheries is available within 6 months of the end of the calendar year
- Number of previously unconnected data sources automatically linked
- Increased number of downloads of data from departmental web sites

Ultimate Impacts

- Better fisheries management decisions
- More sustainable fisheries
- Reduced surveillance and enforcement costs
- More timely access to data to support decision-making
- Better access to departmental data sources for external clients, facilitating scientific and economic research

Theme: Knowledge and Technology for Sustainable Development

Goal # 2B: Effective application of knowledge and new technologies to support the sustainable and safe use of marine and freshwater resources

Objective 2B.1: Application of navigation and marine communication technologies for safe use of Canadian waterways

Expected Outcome	Planned Activities
2B.1.1 – Progress toward a modernized vessel traffic system in Canadian navigable waterways	■ Develop long-term, multi-year action plan and identify resources required by end of 2003
2B.1.2 – Safer and more efficient navigation of Canada's navigable waterways	■ Convert 600 CHS charts to electronic form by end of 2003



Performance Measures/Indicators	Ultimate Impacts
<ul style="list-style-type: none">■ A completed action plan■ Stakeholder support■ Fewer negative environmental incidents resulting from vessel movement■ Compliance rates by Canadian and foreign vessels with Canadian shipping rules <ul style="list-style-type: none">■ Number of charts converted■ Reduced number of incidents	<ul style="list-style-type: none">■ Marine safety■ More competitive shipping industry in Canada■ Reduced risk of environmental degradation or accidents■ Greater protection for Canadian environment and industries from introduction of exotic species <ul style="list-style-type: none">■ Improved marine safety and reliable navigational aids despite increased marine use■ Decreased risk and severity of environmental accidents

Theme: Knowledge and Technology for Sustainable Development

Goal # 2B: Effective application of knowledge and new technologies to support the sustainable and safe use of marine and freshwater resources

Objective 2B.2: Application of science, socio-economic analysis and new technologies for the sustainable use of marine and freshwater resources

Expected Outcome	Planned Activities
2B.2.1 – More effective fisheries management strategies based on the precautionary approach	<ul style="list-style-type: none"> ■ Test Objectives-Based Fisheries Management approach in 10 pilot fisheries by end of 2003
2B.2.2 – National guidelines in place to support sustainable aquaculture	<ul style="list-style-type: none"> ■ Develop national operational policy framework and guidelines for the aquaculture industry, in collaboration with the industry and other stakeholders, by end of 2001
2B.2.3 – Progress toward long term management of fish harvesting capacity in Canada	<ul style="list-style-type: none"> ■ Complete a National Action Plan to manage harvesting capacity and to facilitate self-adjustment by commercial fleets, as part of Canada's commitment to the FAO, by end of 2003
2B.2.4 – Strengthened conservation and protection of oceans ecosystems and their living and non-living marine resources	<ul style="list-style-type: none"> ■ Develop and implement a national system of marine protected areas (MPAs) including designation of five MPAs by end of 2002 ■ Establish marine environmental quality (MEQ) guidelines, objectives and criteria



Performance Measures/Indicators

- Number of pilots implemented
- Policy framework in place
- National guidelines communicated to the aquaculture industry and other stakeholders
- Level of industry and other stakeholder involvement and support
- National Action Plan completed
- Inter-jurisdictional agreement
- Stakeholder support
- Number/coverage/nature of active and proposed MPAs
- Reach and effectiveness of MEQ guidelines, objectives and criteria
- Level of integration vis-à-vis precautionary/ ecosystem

Ultimate Impacts

- Sustainable fisheries/harvesting
- More environmentally sustainable and competitive aquaculture industry in Canada
- Reduced risk of adverse environmental degradation or accidents
- Higher public confidence in products and practices of the Canadian aquaculture industry
- More sustainable and economically viable fishing industry
- Fish harvesting capacity in balance with resource capacity over long term
- Reduced re-structuring costs
- Improved health of estuarine, coastal and marine ecosystems



Theme: Sustainable Operations

Goal # 3: Reduction of negative physical environmental impacts of departmental operations

Objective 3.1: Departmental operations consistent with recognized Canadian and international environmental management standards

Expected Outcome	Planned Activities
3.1.1 – Environmental Performance Baselines (Water/Waste-water, Energy (GHG emissions), Non-Hazardous Solid Waste and Toxic Substances and Halocarbons) established for major DFO facilities by end of 2001	<ul style="list-style-type: none">■ Collect data from DFO facilities■ Compile and synthesize environmental performance information into baselines■ Conduct environmental audits of each major facility
3.1.2 – Environmental Management Programs (EMPs) developed for all environmental aspects including Green Procurement by end of 2003	<ul style="list-style-type: none">■ Use environmental performance baselines collected for the major facilities to develop greening outcomes and action plans for EMPs■ Consult with stakeholders■ Update SD Strategy in 2001 to include outcomes developed from baseline data■ Use DFO's share of the Federal House in Order GHG emissions reduction target as the Energy (GHG emissions) target in 2001
3.1.3 – Effective implementation and performance of existing Management Plans for: 1. Contaminated Sites 2. Ozone-depleting substances (ODS) 3. Fuel Storage Tanks	<ol style="list-style-type: none">1. Complete 800 CCME Phase I assessments and 50 CCME Phase II and/or Phase III assessments per year<ul style="list-style-type: none">■ Use a risk management approach to prioritize sites2. Invest \$250K per year for replacing halocarbon in DFO operations with non-ODS substances<ul style="list-style-type: none">■ Identify feasible replacement candidates■ Complete halocarbon inventory■ Populate the Halocarbon Inventory Database3. 100 Fuel storage tank inspections and 50 tank upgrades per year<ul style="list-style-type: none">■ Complete implementation of the Fuel Storage Tank Management Plan■ Review profile annually to determine departmental liability

Performance Measures/Indicators**Ultimate Impacts**

- Number of baselines established
- Number of DFO facilities examined

- Establishing baselines will provide a level of measurement against which DFO can benchmark its environmental performance in future years

- Number of EMPs prepared on an annual basis

- Reduce DFO's impact on the environment

- Number of Phase I and Phase II and/or Phase III assessments completed per year
- \$ invested per year
- Number of halon systems identified
- Number of reservoirs inspected per year
- Number of reservoirs improved per year
- Number of tanks inspected per year
- Number of tanks upgraded per year

- These actions are proportional to the outcomes established in the EMPs and assist the reduction of DFOs environmental footprint

Theme: Sustainable Operations

Goal # 3: Reduction of negative physical environmental impacts of departmental operations

Objective 3.1: Departmental operations consistent with recognized Canadian and international environmental management standards (*continued*)

Expected Outcome	Planned Activities
3.1.4 – Implementation of Environmental Management Plans (EMP's) at all current client-managed harbours (559) by end of 2002	<ul style="list-style-type: none">■ Sensitize client-managers to the benefits of EMP's and sound environmental practices■ Consult with Client Managers to mould the EMPs to specific harbour needs■ Work with new client-managed harbours to develop EMP's within three years of establishment
3.1.5 – Compliance with ISM Code for all DFO vessels above 125 tonnes by end of 2003	<ul style="list-style-type: none">■ Ensure that the Coast Guard's onboard Safety Management System meets the requirements of the ISM Code■ In partnership with stakeholders, promote the Safety Management System and identify possible improvements to it■ Co-ordinate activities with external auditors from an agency approved by law to issue Documents of Compliance and Safety Management Certificates■ Monitor environmental profile data for all vessels



Performance Measures/Indicators

- Number of EMP's implemented at client-managed harbours per year
- Number of DFO vessels over 125 tonnes certified

Ultimate Impacts

- Increase client-manager awareness of environmental aspects of harbour operations
- Reduce impacts on environment
- Improved safety of DFO vessel operations
- Increased pollution protection
- Reduced vessel operation costs



Theme: Managing for Progress and Performance

Goal # 4: A management system to track progress and performance of the Sustainable Development Strategy

Objective 4.1: Sustainable Development commitments incorporated into departmental integrated planning initiative

Expected Outcome	Planned Activities
4.1.1 – Systematic review and measurement of progress and senior management assessment of performance	<ul style="list-style-type: none">■ Integrate Sustainable Development Strategy into departmental business planning and reporting processes■ Develop a performance measurement framework for the Strategy



Performance Measures/Indicators

- Regular progress reports
- Performance assessment reports
- Senior Management involvement
- Improved credibility with Canadian public, parliamentarians and stakeholders

Ultimate Impacts

- Improved management of the Strategy and Action Plan
- Closing of the "implementation gap"
- Continuous learning



Annex 2: Report on Internal and External Consultations

A successful formulation of DFO's Sustainable Development Strategy can be achieved only through consultations with individuals and organizations that have a significant interest in the mandate of Fisheries and Oceans Canada. Two rounds of consultations were held with key stakeholders and DFO employees during the preparation of this Sustainable Development Strategy. The first consultation process, which focused on a Sustainable Development Discussion Paper (July-August, 2000), sought support for the proposed DFO sustainable development policy and the proposed themes for the new Strategy. In October and November 2000, the second consultation phase sought comments on a draft Sustainable Development Strategy, including the proposed Action Plan.

Who was consulted?

Individuals and organizations having a significant interest in what Fisheries and Oceans Canada does – its legal mandate, its programs and its operations, including:

- Provincial and territorial governments;
- Other federal government departments;
- Aboriginal groups;
- Fish harvesting and processing industries;
- Non-governmental groups, especially environmental groups;

- Academic community;
- Fishers' unions and associations;
- Marine commerce and transportation sectors;
- Oil, gas and pulp and paper industries; and
- DFO employees, in all regions.

How were the consultations done?

- Throughout the development of our Sustainable Development Strategy, consultations were undertaken with representatives from all DFO Sectors and Regions. Such working groups allowed DFO to identify within its Action Plan the themes, the actions, and the sustainable development impacts of each expected outcome.
- Internet and Intranet web sites were created, allowing for key stakeholders and DFO employees to access both the Discussion Paper and the draft Sustainable Development Strategy in both HTML and PDF formats and to provide comments through an on-line response form.
- Letters inviting nearly 300 key stakeholders to comment on both the Sustainable Development Discussion Paper and the draft Sustainable Development Strategy were sent out in July and in October. These letters informed the recipients how to obtain electronic or hard copies of these documents and where to forward their comments.

- An Inuktitut translation of the Discussion Paper was available for consultations in Nunavut.
- Emails were forwarded to all 8,500 DFO employees informing them of the development of the Sustainable Development Strategy and the availability of the Sustainable Development Discussion Paper and the draft Sustainable Development Strategy and inviting them to comment.
- Letters of appreciation were sent by the Assistant Deputy Minister, on behalf of the Department, to all key stakeholders and DFO employees who submitted comments.

Stakeholder Comments

During both phases of consultation, a limited number of comments were received from external stakeholders. However, these comments were constructive, engaged and very useful in assisting DFO to reflect on the draft Strategy, to correct omissions and to increase clarity. Efforts were made to reflect all comments in the final 2001-2003 Sustainable Development Strategy. The following items indicate the major substantive comments made by stakeholders or those made independently by several stakeholders and describes how the Department plans to address them within the Sustainable Development Strategy or by other means.

- *Fish Habitat*: Some stakeholders believed that issues surrounding fish habitat management should be more visible within the Strategy. In response to such comments, DFO will undertake under Theme One to strengthen partnerships with clients and stakeholders to advance the protection of fish habitat, in particular with the development of a comprehensive national Habitat Management Program.
- *Exotic Species*: Several stakeholders raised concerns regarding the threat of exotic or nuisance species on the long-term health and biodiversity of aquatic resources in Canada. They observed that ignoring the problem of exotic species entering Canadian aquatic ecosystems could produce negative socio-economic impacts. DFO is studying this issue, in particular the consequences of these introductions into Canada's marine and freshwater systems and will consider partnerships with other federal Departments and levels of government to address this problem.
- *Emerging oceans uses*: Some stakeholders considered that the draft Sustainable Development Strategy should address emerging oceans uses and the potential for negative sustainable development impacts. This Sustainable Development Strategy acknowledges that emerging and expanding oceans industries provide significant challenges to the sustainable development of these resources. DFO will continue to investigate and test new tools and processes, notably integrated oceans management and shared stewardship arrangements.

■ *Northern Sustainable Development Strategy:*

Questions were raised regarding the application of DFO's Sustainable Development Strategy in the North. New text was added to the draft Strategy to indicate DFO's participation in ongoing development of a federal Government Northern Sustainable Development Strategy, as one of the priorities for enhanced horizontal cooperation by federal government departments. New knowledge will be required to address current and foreseeable environmental issues, such as existing or potential impacts on Northern aquatic resources of climate change and economic development based on non-renewable resource industries. Assessing the need for new scientific research to support implementation of DFO's responsibilities in the North for fisheries and oceans management, for environmental and fish habitat protection and for safe shipping will need to be pursued.

■ *Freshwater Fisheries:* Some stakeholders com-

mented that freshwater fish and fishing should be given greater recognition in the Sustainable Development Strategy. One comment was that the "conservation and sustainable resource use" component of the Vision statement should apply to freshwater as well as marine resources. Another noted that strengthening the conservation and protection of ocean ecosystems should apply equally to freshwater systems. It was also suggested that DFO should develop a freshwater fish habitat protection strategy and involve stakeholders and the public in its development. In response to these comments but recognizing the roles and responsibilities of federal and provincial governments, concerns relating to freshwater fisheries are being addressed through intergovernmental initiatives such as the CCFAM Freshwater Task Group as well as through DFO's strengthened national habitat protection program (Outcome 1.1.4).



Annex 3: Glossary



Aboriginal Fisheries Strategy (AFS) – seeks to provide for the effective management and regulation of the Aboriginal fisheries and ensures that the Aboriginal right to fish is respected, through negotiation of mutually acceptable, and time-limited Fisheries Agreements between DFO and Aboriginal groups. Where agreement cannot be reached, DFO will issue a communal fishing license to the groups allowing them to fish for food, social and ceremonial purposes. The AFS applies only where Canada is responsible for managing fisheries.

Argo Program – is an international venture that aims to deploy 2000 profiling Alace floats around the world. The target depth of these floats will be approximately 2000 metres. They are likely to surface every 10 days and will provide data on oceans currents globally, on surface drift velocity, and on temperature and salinity.

Automatic Identification System (AIS) – is a broadcast transponder system that is capable of automatically sending ship information (such as identification, position, heading, length, beam, type, draught, and hazardous cargo information) to other ships and shore based stations. It has been developed primarily as a safety system to enhance the safety of navigation at sea, but also has potential benefits for other marine programs and some commercial applications.

Canadian Council of Ministers of the Environment (CCME) – is the major inter-governmental forum in Canada for discussion and joint action on environmental issues of national and

international concern. The Council is made up of Environment Ministers from the federal, provincial and territorial governments.

Canadian Council of Fisheries and Aquaculture Ministers (CCFAM) – was established through the 1999 Agreement on Inter-jurisdictional Cooperation. Membership comprises the federal, provincial and territorial Ministers with responsibilities for fisheries and aquaculture. The Council meets annually and has established several working groups to address specific topics of mutual interest such as freshwater fisheries management and an aquaculture development strategy.

Canadian Hydrographic Services (CHS) – is responsible for surveying Canadian navigable waterways and for producing a number of nautical publications, including nautical charts, sailing directions, bathymetric maps and tide and current tables.

Climate Change Action Fund (CCAF) – was established by the Government of Canada in December 1997 to help meet its Kyoto Protocol commitments. This \$150 million fund allocates support to implement a strategy to meet these commitments and to facilitate early action to reduce greenhouse gas emissions.

Electronic Chart and Display Information System (ECDIS) – is a component of the Marine Aid Modernization Initiative undertaken by the Canadian Coast Guard to ensure that the national marine transportation system continues to be safe, effective, environmentally sound, and responsive to

the needs of Canadians. The onboard ECDIS allows mariners to continuously update their vessel's position within the advertised coverage zones.

Food and Agriculture Organization (FAO) – is mandated by the United Nations since October 1945 to raise levels of nutrition and standards of living, to improve agricultural productivity, and to better the condition of rural populations.

Integrated Fish Management Plans (IFMPs) – in effect set the stage for co-management arrangements by ensuring transparency, establishing overall allocations between sectors and fleets, providing relevant contextual information and ensuring that clients and stakeholders are consulted on the overall goals and strategies for the management of each fishery.

International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC) – provides a global framework for international co-operation in combating major incidents or threats of marine pollution. Parties to the convention are required to establish measures for dealing with pollution incidents, either nationally or in co-operation with other countries.

International Organization for Standardization (ISO) – is a non-governmental, worldwide federation of national standards bodies established in 1947 to promote the development of standardization and related activities in the world, to facilitate the international exchange of goods and services,

and to develop cooperation in the spheres of intellectual, scientific, technological and economic activity.

Joint Project Agreements (JPAs) – are voluntary, negotiated, legally binding arrangements whereby DFO and parties to a fishery agree to participate in a project related to activities associated with the management and operation of that fishery. JPAs are a key component of DFO's co-management approach.

Marine Environmental Quality (MEQ) – tells us how healthy our marine ecosystems are. Both natural and human activities – including climate change, natural catastrophes, man-made pollution and use of marine resources – affect the physics, water chemistry and biology of marine ecosystems. MEQ integrates these environmental conditions to assess the health of marine ecosystems.

Marine Protected Areas (MPAs) – provide a powerful and proven tool for achieving conservation objectives in the marine environment. Through MPAs, DFO can begin to protect important ecosystems and species, thereby protecting the marine environment and resources upon which our coastal communities depend.

National Programme of Action (NPA) – proposes national and regional programs to protect human health, the environment and to prevent, reduce and control land-based activities that contribute to the degradation of the marine environment.