National Strategies
for
Sustainable Development

Challenges, Approaches and Innovations in Strategic and Co-ordinated Action

Based on a 19-country Analysis

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Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung

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The International Institute for Sustainable Development contributes to sustainable development by advancing policy recommendations on international trade and investment, economic policy, climate change, measurement and indicators, and natural resources management. By using Internet communications, we report on international negotiations and broker knowledge gained through collaborative projects with global partners, resulting in more rigorous research, capacity building in developing countries and better dialogue between North and South.

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The Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)

The Organization

The Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH is an international cooperation enterprise for sustainable development with worldwide operations. It provides viable, forward-looking solutions for political, economic, ecological and social development in a globalized world. GTZ promotes complex reforms and change processes, often working under difficult conditions. Its corporate objective is to improve people's living conditions on a sustainable basis.

GTZ Clients

GTZ is a federal enterprise based in Eschborn near Frankfurt am Main. It was founded in 1975 as a company under private law. The German Federal Ministry for Economic Cooperation and Development (BMZ) is its major client. The company also operates on behalf of other German ministries, partner-country governments and international clients, such as the European Commission, the United Nations and the World Bank as well as on behalf of private enterprises. GTZ works on a public-benefit basis. Any surpluses generated are channelled back into its own international cooperation projects for sustainable development.

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In more than 130 countries of Africa, Asia, Latin America, the Eastern European countries in transition, the New Independent States (NIS) and in Germany, GTZ employs some 9,500 staff. Around 1,100 of these are seconded experts; approximately 7,100 national personnel; and around 300 experts in projects in Germany. GTZ maintains its own offices in 67 countries. About 1,000 people are employed at Head Office in Eschborn near Frankfurt am Main.

Stratos Inc.

Located in Ottawa, Stratos Inc. is an independent, Canadian-owned firm that provides business, governments and international institutions with expert advice, information and tools that assist in the development and implementation of more sustainable practices and policies. Stratos combines forward-looking policy and strategic expertise with specific skills in program design and implementation, law and policy, public consultations, Environmental Management Systems (EMS design, implementation and audit), corporate sustainability reporting, indicator development and performance measurement. Stratos is one of Canada's leading sustainability consultancies with a wide range of clients at the national and international levels including government policy and regulatory agencies; corporations in the energy, resources and service sectors; industry associations; international organizations; and NGOs.

Environmental Policy Research Centre, Freie Universität of Berlin

The Environmental Policy Research Centre is a research institute which is active foremost in exploring the potentials, restrictions and impacts of national environmental policy-making within the wider context of global environmental governance. Its work is based mainly on comparative research of industrialized countries and ex-post analysis of environmental policies. Therefore, considerable attention is paid to the development of new strategic concepts for environmental policy-making.

The Environmental Policy Research Centre was founded in 1986. It is active both in basic and applied research and provides policy advice for a number of political bodies and private institutions in Germany and abroad.

The Centre forms part of a large international network of social science institutes for environmental research. Together with the Potsdam-Institute for Climate Impact Research and Oldenburg University, it has initiated the Global Governance Project. It is also organizes the annual international Berlin Conference on the Human Dimensions of Global Environmental Change.

Currently, the Centre employs more than 20 staff. International funding agencies are the Commission of the European Union, the OECD, the University of the United Nations and the Anglo-German Foundation. Other project funding comes from the Federal Ministries for Education and Research (BMBF) and for Environment (BMU); the Federal Environmental Agency and the Federal Nature Conservation Agency; the Bundestag (German Parliament) and a variety of private sector foundations.

Contents

Executive Summary

This report has been prepared to assist government managers and policy-makers in taking strategic and co-ordinated action toward sustainable development at the national level. This action is most commonly referred to as a national sustainable development strategy—a process that represents a transition from the traditional fixed plan, "towards operating an adaptive system that can continuously improve."[1] For the purposes of this report, we characterize this process in terms of leadership, planning, implementation, and monitoring and learning, all predicated by cross-cutting management aspects of co-ordination and participation. It is this type of process that nations at the 2002 World Summit on Sustainable Development (WSSD) were asked to formulate, elaborate and begin implementing by 2005 through the national sustainable development strategy process.

Sustainable development competes with many deeply entrenched values and, therefore, progress is slow. For example, sustainable development forces the reconciliation of the short-term electoral cycle with long-term planning; the goal of economic growth with environmental and social sustainability; the advantages of policy coherence through greater co-ordination with the move toward decentralization. These are all difficult challenges to which there are no easy answers. To contribute to the growing body of knowledge on strategic and co-ordinated action for sustainable development,[2] 19 developing and developed countries[3] from around the world were studied to compile a list of key challenges, approaches and innovations observed in the strategic management aspects of the national sustainable development strategy process (e.g., leadership, planning, implementation, monitoring, co-ordination and participation). In some countries, this represents an experience base of more than 15 years from which to learn. This report documents this acquired learning and identifies some of the systemic weaknesses in current national level strategic and co-ordinated action.

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1 Dalal-Clayton and Bass (2002).

2 For example, the guidelines for national sustainable development strategies produced by the United Nations Division for Sustainable Development and the Development Assistance Committee of the Organization for Economic Cooperation and Development, and on recent research such as the Sustainable Development Strategies Resource Book compiled by Dalal-Clayton and Bass (2002).

3 Countries studied were Brazil, Cameroon, Canada, China, Costa Rica, Denmark, Germany, India, Madagascar, Mexico, Morocco, the Philippines, Poland, South Africa, South Korea, Sweden, Switzerland, the United Kingdom as well as the European Union.

Country-level research was conducted on an independent basis using publicly available documents and literature, complemented where possible by feedback from government representatives and other experts. The findings presented in this report therefore represent a good initial step for a continued dialogue on the challenges, approaches and innovations experienced by nations in the sustainable development strategy process.

Key Findings

The country case study research illustrated that many innovative approaches and tools for strategic and co-ordinated action for sustainable development have been developed and applied over the past decade—before and after WSSD. The innovations can be seen in many of the countries studied and in all aspects of the sustainable development strategy process, including leadership, planning, implementation, and monitoring and learning, and with respect to specific cross-cutting management aspects of co-ordination and participation. This is a significant achievement given that focused attention to sustainable development started less than two decades ago. This body of approaches and tools adds to existing information on best practices, and can help managers and policy-makers enhance efforts toward formulating, elaborating and implementing national strategies for sustainable development.

However, despite the progress made, nations are only at the early stages of learning toward effective strategic and co-ordinated action for sustainable development. From our analysis of 19 countries we conclude that few countries are acting truly strategically. Many challenges remain in the continuous cycle of strategic management. The key challenges, along with some of the innovative approaches and tools employed to address them, include:

- *The feedback mechanism – including monitoring, learning and adaptation.* While most nations have statistical offices that monitor various aspects of our economy, society and environment, only a few countries have developed an integrated set of indicators to allow analysis of the inherent trade-offs and interlinkages among the economic, social and environmental dimensions of sustainable development. Even more elusive to detect from the research were formal and informal approaches and tools to learn from this type of integrated monitoring and to make critical and necessary

adaptations. We manage what we measure. Until we systematically monitor integrated sets of sustainability indicators, and employ a mix of formal and informal approaches and tools to learn and adapt accordingly, nations will not be acting strategically.

In addressing these challenges, among the 19 countries studied, the U.K. appeared as a consistent innovator through such approaches and tools as national sustainable development indicators and reporting; sustainable development audit committees and spending reviews; a Task Force for national strategy revision; and sustainable development research networks.

- *Co-ordination of strategy objectives and initiatives with the national budgeting process.* Sustainable development challenges us to re-think our existing policy initiatives as well as to develop new ones to address key issues. This also includes re-thinking our expenditure and revenue generation processes. Yet the overarching vision and specific objectives created through a national sustainable development strategy process still have little influence on national budget expenditures or revenue-generating processes. Most national sustainable development strategies simply remain at the periphery of government decision-making. Until finance ministries or departments play a central role in the sustainable development strategy process, the process of strategic management to ensure the sustainable progress and development of nations on the one hand, and fiscal priority setting and national expenditure and revenue generation on the other, will not be fully integrated.

An interesting example that begins to address this challenge was observed in Mexico where the current approach is to integrate sustainable development principles directly into its existing national development planning process, rather than creating a separate strategy process parallel to the national expenditure and revenue-generating process. Additionally, the Philippines narrowed the distance between the sustainable development strategy and the national budgeting process by establishing the National Economic Development Authority as the lead agency for the Philippine Council for Sustainable Development.

- *Co-ordination with sub-national and local sustainable development action.* To be considered strategic and effective, national action toward sustainable development must catalyze sustainable development action at the sub-national and local levels and manage the interdependency between levels of government. Promoting sustainable development effectively when central, state or provincial and municipal governments may all be pursuing different agendas is inherently complex. The research revealed that few countries were attempting to catalyze and co-ordinate with SD efforts at sub-national and local governance levels.

Several countries demonstrate co-ordination with sub-national sustainable development strategy processes including Denmark, South Korea, China and Costa Rica. For example, in South Korea, 213 out of 249 regional government units have adopted a Local Agenda 21. South Korea's National Action Plan of Agenda 21 fostered Local Agenda 21s through financial and capacity support, and the government established the *Korean Council for Local Agenda 21* to better co-ordinate the implementation process.

- *Implementing a mix of policy initiatives, and in particular, environmental fiscal reform initiatives which are typically underleveraged.* The complex and diverse nature of the interactions among people and among people and their environment demands that policy responses to key sustainable development issues be varied. Governments at all levels have at their disposal a mix of policy initiatives including regulatory, program or project expenditures, institutional and economic initiatives. Our research indicates that while a mix of policy initiatives has been pursued in some countries, economic instruments appear to be under-utilized. This is problematic given that all of the countries studied rely to an increasing extent on the market to allocate resources, and the market consists of the decentralized activity of millions of consumers, investors, lenders, producers, etc., each with the potential to impact on the environmental and social systems that support our well-being. Until nations leverage the instruments of environmental fiscal reform (e.g., ecological taxes, subsidy reform, user fees, etc.)

and economic instruments such as emissions trading, efforts toward sustainable development will be playing at the margin.

Among the countries studied, Sweden has been particularly adept at addressing this challenge. Experiments with environmental tax shifting in Sweden began in 1991 when it raised taxes on carbon and sulfur emissions and reduced income taxes. In 2001, the government increased taxes on diesel fuel, heating oil and electricity while lowering income taxes and social security contributions. Six per cent of all government revenue in Sweden has now been shifted, helping Sweden reduce greenhouse gas emissions more quickly than anticipated. Some of the other studied countries active in environmental fiscal reform and economic instruments are Germany, U.K., Costa Rica, Brazil and Poland.

Overview of Challenges, Approaches and Innovations

In this report we identify many other challenges from the country research in relation to strategic management aspects of leadership, planning, implementation, monitoring and learning, and cross-cutting aspects of co-ordination and participation. For each aspect, the approaches and tools that were observed are presented along with detailed innovative examples. An overview of this information is provided in Table ES-1. Some of the key learning related to each of the strategic management aspects presented in Table ES-1 includes:

Leadership:

- *Strategy approach.* Four main types of national SD strategy approaches were observed: comprehensive and multi-dimensional (e.g., Philippine National Agenda 21, German national sustainable development strategy); cross-sectoral (e.g., Cameroon Poverty Reduction Strategy Paper); sectoral (e.g., Canada Departmental SD Strategies); and integration of SD into existing planning processes (e.g., Mexico National Development Plan).

- *Commitment and focus.* In addressing the challenge of commitment and focus toward sustainable development, seven of 19 countries studied have systematically developed quantifiable and measurable targets for sustainable development objectives.

- *The inter-generational principle of sustainable development.* Only a few of the countries studied considered a strategy outlook that was explicitly intergenerational—spanning upwards of 25–30 years into the future (i.e., Sweden, Denmark, Germany, the Philippines and Mexico); and

- *Understanding the linkages among economic, social and environmental systems.* In many cases, national sustainable development strategies were a compilation of economic, social and environmental issues, objectives and initiatives. The fundamental notion of how issues, objectives and initiatives influence each other—both positively and negatively—was not a fundamental part of strategy content. The only tools observed that would help improve understanding of the linkages among economic, social and environmental systems were *Integrated Policy Appraisal* and *Strategic Sustainability Assessment* used by the U.K. and Switzerland, respectively, in the planning process and in the setting of cross-cutting strategy objectives (e.g., Germany).

Planning:

- *Establishing a clear legal mandate for the strategy process.* Only a few countries had a clear legal mandate for the strategy process. Canada's amendment to the Auditor General Act in 1995 was an innovative example whereby 25 federal departments are required to submit sustainable development strategies to Parliament every three years.

- *Thinking strategically about institutional arrangements.* Among the countries studied, most strategy processes had institutional grounding in the environment department, limiting the extent of influence across government. The Philippines has taken a more strategic approach as seen in the chairmanship of the Philippine Council for Sustainable Development—this council is chaired by the vice-chairman of the National Economic Development Authority.

- *Assessing specific policy initiatives in an integrated manner.* Most of the countries studied analyzed proposed policy initiatives from a single perspective (e.g., environmental or social). The *Integrated Policy Appraisal* and *Strategic Sustainability Assessment* tools mentioned pre-

viously are the innovative examples addressing this particular planning challenge.

Implementation:

- *Establishing responsibility for implementation of strategy objectives*. A promising trend was observed in the strategy process in Germany and the EU (among others) whereby responsibility for the strategy process as a whole had been shifted to the president/prime minister's office.

- *Using a mix of financing arrangements*. Countries such as Costa Rica, Sweden, Poland and Brazil were innovative through the generation of revenue from ecological taxes and payment for ecological services.

- *Using a mix of policy initiatives*. Previously discussed under Key Findings.

Monitoring, Learning and Adaptation:

Previously discussed under Key Findings.

Co-ordination:

- *With national budget expenditure and revenue generation processes*. Previously discussed under Key Findings.

- *With sub-national and local sustainable development sustainable development action*. Previously discussed under Key Findings.

- *With other national-level strategy processes*. Horizontal co-ordination for sectoral (e.g., departmental) and cross-sectoral strategy approaches (e.g., between Poverty Reduction Strategy Papers and Environmental Management Plans) remains a significant challenge.

Participation:

- *Institutionalizing participation*. Various approaches and tools for institutionalizing participation were observed including national councils for SD, cross-sectoral councils or networks, independent advisory bodies, place-based councils and ad hoc participation. The advancement in participatory governance has been quite significant since the concept of sustainable development was first mainstreamed in the late 1980s and early 1990s.

- *Building trust*. This case study research highlighted building trust as an important part of the participation process. Mexico employed some innovative advertising and media-based methods to obtain members for its National Consultative Council for SD. Brazil recognized the importance of explicit attention to conflict management in the strategy process.

Like national SD strategies, WSSD also called on all countries to develop and implement by 2005, national and regional strategies, plans and programs related to integrated water resources management (IWRM). Information on national IWRM efforts from some of the 19 focus countries were compiled and analyzed to identify ways in which the national sustainable development strategy process could learn from IWRM strategy processes. Similar to recommendations that have been made for national SD strategies by a range of organizations, the Global Water Partnership has recommended a continuous strategic management cycle for IWRM which reflects aspects of leadership, planning, implementation, and monitoring. Given the similarities in process between national sustainable development strategies and IWRM, the potential for cross-learning and co-ordination is significant.

The IWRM analysis in this report revealed that experience with IWRM at the national level offers many interesting potential approaches for the national SD strategy process. For example, IWRM efforts have learned through experience that to understand and pragmatically address the complex inter-dependency of economic, social and environmental systems—one of the more intractable challenges of the national SD strategy process—the spatial reference for integrated water resources management is best taken as the watershed catchment area (river, lake or groundwater basin), rather than the political or administrative border. With regard to the planning aspects of strategic management, the EU Water Framework Directive which entered into force in 2000 set time-bound output targets for each stage of the strategic process. Related to implementation aspects, the EU Water Framework Directive recognized the importance of leveraging a mix of policy initiatives and established a target for the introduction of pricing policies by 2010. The research identified that coordination among the national sustainable development strategy process and sector-specific strategy processes such as water resources remains a challenge, a challenge that will need to be addressed in order to help ensure that the many key sector-specific issues that demand detailed, national-level strategic action, are mutually reinforcing.

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Concluding Remarks

In the short term, a national strategy is not the solution to all that ails us. Some nations were implementing effective policy initiatives before a formal sustainable development strategy process was initiated. Most nations know now what their pressing issues are and how to address them, and a national strategy will not magically result in the implementation of the necessary policy initiatives. However, in the medium to long-term, work toward improving strategic and co-ordinated action toward SD will yield large gains in the ability of nations to identify leverage points for influencing SD, to identify emerging issues, and to continuously learn and adapt in a world where surprise, change and uncertainty are the norm, not the exception.

Table ES-1. Summary of challenges, approaches and innovations in strategic and co-ordinated action for sustainable development at the national level.

LEADERSHIP		
Challenges	**Approaches and Tools**	**Examples and Innovations**
Choosing approaches for the strategy process	· Comprehensive strategy (15 countries) · Cross-sectoral strategy (4 countries) · Sectoral strategies (Canada) · Integration with existing planning process (Mexico, India)	· U.K., Philippines · Cameroon and Madagascar PRSPs · Canada · Mexico
Demonstrating committment and focus	· Quantified and time-bound objectives (7 of 19 countries) · Constitutional provisions	· Germany · Switzerland
Inter-generational principle of SD	· Long-term objectives	· Sweden, Denmark
Understanding interdependency	· Integrated policy assessment · Strategic sustainability assessment · Cross-cutting objectives	· U.K. · Switzerland · Germany
PLANNING		
Legal basis	· Enactment as law	· Canada, EU, Mexico
Institutional basis	· Green Cabinet · Home outside of environment departments · Inter-departmental Commission	· Germany, U.K. · Philippines, China, Sweden · Switzerland
Policy assessment	· Strategic Environmental Assessment (8 countries) · Strategic Sustainability Assessment · Integrated Policy Assessment	· EU · Switzerland · U.K.
IMPLEMENTATION		
Responsibility	· Shifting of responsibility to prime minister/president	· Germany, Mexico, South Korea, Cameroon
Financing	· Green Budgeting · HIPC debt relief · Donor co-ordination · See also co-ordination with national budgeting process	· Costa Rica, Poland, Sweden · Cameroon, Madagascar · Madagascar
Mix of specific SD initiatives	· Action Plans · Expenditure policy initiatives · Economic policy initiatives · Regulatory policy initiatives · Institutional policy initiatives	· Denmark, Madagascar, EU, South Korea · U.K., Morocco · Sweden, EU, U.K., Germany · South Korea · Philippines

MONITORING, LEARNING AND ADAPTATION		
Challenges	**Approaches and Tools**	**Examples and Innovations**
Process monitoring	• Process (output)-type monitoring and reporting (9 countries) • Auditing agencies • Spending reviews • Minister's reports	• Canada, U.K. • Canada • U.K., Cameroon and Madagascar PRSP • U.K.
Monitoring outcomes	• National SD indicators and reporting (9 countries) • National accounts statistics • Auditing agencies • Auditing committees • Independent advisory bodies	• EU, Morocco • Sweden, South Korea • Canada • U.K. • U.K.
Learning and adaptation	• Independent agencies and committees • Task Force or strategy revision • Advisory councils • Progress reporting • Research networks • Public consultations	• Canada, U.K., Philippines • U.K., Philippines • Mexico • Sweden, Germany, EU • U.K. • India, Cameroon
CO-ORDINATION (cross-cutting)		
With national budgeting processes	• Incentive structures • Spending review • Environmental taxes • Links to national planning process	• PRSPs and HIPC debt relief • U.K. • Sweden • Mexico, Philippines
With other strategy processes	• Comprehensive SD strategies that provide framework for other strategies • Inter-departmental co-ordinating committees • Institutional home for national SD council • Cross-sectoral workshops and action areas • Cross-cutting issues • Green Cabinets	• U.K. • Canada • Philippines • Morocco • Germany, Canada, Cameroon, Madagascar, South Korea • Germany, U.K.
With sub-national and local strategy processes	• Municipal SD strategies • Local Agenda 21 process	• Denmark • South Korea
PARTICIPATION (cross-cutting)		
Institutionalizing participation	• National councils for SD • Cross-sectoral councils • Independent advisory bodies • Place-based councils • Ad hoc public consultation	• Philippines, Germany • Cameroon • U.K. • Costa Rica • Canada, Denmark, Morocco, Poland, Sweden, Switzerland
Building trust	• Use of media to obtain members • Negotiation and conflict resolution as an explicit and necessary part of the participation process	• Mexico, Brazil • Brazil

1. Introduction

1.1 Background

For over a decade now the United Nations has been asking all countries to pursue strategic and co-ordinated action for sustainable development through the creation of national sustainable development strategies. This call first was first made at the 1992 UN Conference on Environment and Development (UNCED) and through its program of action for sustainable development—Agenda 21—the Conference asked countries to adopt a national strategy for sustainable development to "build upon and harmonize the various sectoral economic, social and environmental policies and plans that are operating in the country" (UN Division for Sustainable Development – DSD 2004). The 1997 Special Session of the UN General Assembly invigorated this effort by setting a target date of 2002 for "the formulation and elaboration of national strategies for sustainable development" (UN DSD 2004). Most recently, the 2002 World Summit on Sustainable Development (WSSD) called on all countries "to make progress in the formulation and elaboration of national strategies for sustainable development and begin their implementation by 2005" (UN DSD 2004). Some countries have taken a strategic approach in developing, planning, implementing, and monitoring a mix of specific policy initiatives—economic, regulatory, expenditure and institutional—even predating the 1992 Agenda 21 call. Others are just beginning, or are yet to begin, this complex strategic process.

During this time, a number of studies have been undertaken to assess strategic and co-ordinated action for sustainable development (SD). Most recently was the 2002 Sustainable Development Strategies Resource Book compiled by the International Institute for Environment and Development (IIED) and funded by the UN Development Programme (UNDP) and the Organization for Economic Co-operation and Development (OECD) (Dalal-Clayton and Bass 2002). This study reviewed existing strategy process and introduced new thinking. Guidance documents and key principles for the preparation of national SD strategies have also developed by the UN Department of Economic and Social Affairs (UN DESA 2002) and the Development Assistance Committee of the OECD (OECD-DAC 2001).

1.2 Objectives

This report builds on the above resources and others to provide government SD managers with a recent compilation of key challenges, approaches and tools, innova-

tions and lessons learned in strategic and co-ordinated action for SD at the national level. We based this compilation on independent research conducted on 19 developed and developing countries from around the world and for efforts both pre- and post-WSSD (Figure 1-1).

Experience has shown that a pathway to sustainable development cannot be charted in advance. Rather, the pathway must be navigated through processes of learning and adaptation (National Academy of Science 1999). The intent of this report is to provide government SD managers with practical and accessible information and examples on strategic and co-ordinated action for SD, and to distill from this the key lessons learned necessary to help SD managers improve the efficiency of the learning process and facilitate implementation.

Figure 1-1. Locations of country case studies.

Brazil, Cameroon, Canada, China, Costa Rica, Denmark, Germany, India, Madagascar, Mexico, Morocco, the Philippines, Poland, South Africa, South Korea, Sweden, Switzerland, the United Kingdom as well as the European Union.

An International and Collaborative Research Project

This project is a collaborative effort. Its research partners are the International Institute for Sustainable Development (IISD), the Canadian consulting firm Stratos Inc., and the Environmental Policy Research Centre of the Freie Universität Berlin (FFU). The study has been funded by Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ; commissioned by the German Federal Ministry for Economic Cooperation and Development – BMZ), the Canadian International Development Agency (CIDA), Foreign Affairs Canada, and Environment Canada. Advisors to the project are IUCN – The World Conservation Union and the UN Division for Sustainable Development.

The project was managed by IISD and builds on the efforts of the research partners and funders. In Spring 2003, Stratos Inc. completed a project commissioned by Canada's WSSD Secretariat regarding sustainable development priorities and post-WSSD responses in several OECD countries. At the same time, GTZ through its "Rioplus" project, supports partner countries in developing and implementing (national) strategies for sustainable development. Focusing its support on process aspects, GTZ is interested in the institutional and procedural aspects of sustainable development strategies and practices, including: the monitoring of these strategies; strategic environmental assessments; mobilization of financial resources for sustainable development strategies; communication and awareness-raising; and negotiation and conflict management.

Both of these initiatives align with the mandate and interests of the United Nations Division for Sustainable Development (UN-DSD) to monitor the implementation of national sustainable development strategies (NSDS). The UN-DSD has been collecting information on the status of strategies from national reports periodically provided by countries.

1.3   Research Methods

Independent research was conducted on 19 countries that were selected to provide a rich foundation of SD strategy experiences from which to compile key challenges encountered, the common approaches and tools used, and to highlight key innovations.

The criteria for country selection included:

- mix of developed and developing countries;

- broad geographic representation;

- not extensively covered in previous research; and

- to include at least some potential leaders and a diversity of approaches.

Countries studied were Brazil, Cameroon, Canada, China, Costa Rica, Denmark, Germany, India, Madagascar, Mexico, Morocco, the Philippines, Poland, South Africa, South Korea, Sweden, Switzerland, the United Kingdom as well as the European Union.

The case study research was not conducted by the countries themselves, but rather, on an independent basis by the three project research partners. Information was obtained from publicly available sources (e.g., government strategy documents, Internet sources, literature sources) and through interviews with government officials where possible in order to fill data gaps and to improve the accuracy of the case study research. Every effort was made to ensure that official national SD focal points had the opportunity to provide feedback on the research conducted for their respective country, but such contact was not successful in all cases.

To conduct the research a common analytical framework was developed by the research and funding partners and the project's external advisors (presented in Section 2). The framework was based on a strategic management cycle and is consistent with the continuous improvement approach to managing sustainable development strategies from Dalal-Clayton and Bass (2002). The detailed analytic questions used in the research are presented in Annex 1.

This report is not a step-by-step "how to" manual for the national SD strategy process. Rather, the report is a synthesis of some of the key challenges, approaches and tools, and innovations at various stages throughout the strategy process observed in 19 countries. To organize the synthesis and to articulate the strategy process, we use a strategic management model that is based on recent thinking on effective national SD strategy processes (Dalal-Clayton and Bass 2002; Steurer and Martinuzzi 2004).

Much has been researched and written on what should be done to achieve sustainable development, but little information is available on how it should be done. Therefore, this report focuses mostly on process, rather than the content of the strategies themselves. To what extent the SD strategies resulted in tangible progress toward SD is another question altogether—albeit a critical one. We do not assume that a "good" process will always lead to "good" results, but given that national SD efforts are relatively recent and, therefore, on-the-ground change perhaps to early to detect, assessment of process provides a necessary proxy for effectiveness.

Recognizing that a process focus on national level strategic and co-ordinated action for SD would not capture the efforts at a sectoral level, and to enhance the learning related to strategic and co-ordinated action, this project included an analysis of national efforts toward integrated water resources management (IWRM) in several of the focus countries. The IWRM efforts and the learning they contribute to strategic and co-ordinated action are featured in this report in a

series of *IWRM Feature* boxes interspersed throughout this report. The specific analytic questions considered in the IWRM research are presented in Annex 2.

1.4   How to Use this Report

The information in this report is organized around a simplified strategic management cycle which is presented in Section 2. Section 3 of this report is designed to give government SD managers and policy-makers easy access to a compilation and analysis of challenges, approaches and tools, and innovations in the SD strategy process at the national level. Readers that would like to obtain more detail on a specific innovative approach or tool are directed to the case study corresponding to the country that is referenced. These country case studies can be viewed and downloaded at the following Internet addresses:

http://www.iisd.org/measure/capacity/sdsip.asp

http://www.gtz.de/rioplus/download

In Section 4 we synthesize the findings through both a big-picture and close-up view of the key learning acquired in Section 3. Section 4 highlights the key problem areas of the strategic management cycle to better understand them and identify necessary adaption. To capture the pertinent learning from Integrated Water Resource Management (IWRM), we feature a series of *IWRM Features* interspersed throughout the report (see *IWRM Feature 1* below).

IWRM Feature 1. Learning from National Efforts Toward Integrated Water Resource Management (IWRM)

The Global Water Partnership defines IWRM as…

"a process which promotes the co-ordinated development and management of water, land and related resources in order to maximize the resultant economic, social welfare in an equitable manner without compromising the sustainability of vital ecosystems (Jønch-Clausen 2004)."

Efforts toward integrating SD into national planning are analogous to national efforts toward integrating the concept of Integrated Water Resource Management (IWRM) into traditional water resources planning. And like national SD strategies, countries were also called upon at WSSD to make significant progress by 2005.

Johannesburg Plan of Implementation

26. Develop integrated water resources management and water efficiency plans by 2005, with support to developing countries, through actions at all levels to:

(a) Develop and implement national/regional strategies, plans and programmes with regard to integrated river basin, watershed and groundwater management and introduce measures to improve the efficiency of water infrastructure to reduce losses and increase recycling of water;

Given the similarities, and that IWRM is a component of many SD strategies, there is much to be gained in this project from studying IWRM efforts of countries. IWRM is not an end in itself but a means of achieving three key strategic objectives: efficiency, to make water resources go as far as possible; equity, in the allocation of water across different social and economic groups; and environmental sustainability, to protect the water resources base and associated ecosystems (Jønch-Clausen 2004).

It has three features which differentiate it from traditional resource-based management. First, it is more "bottom up" than "top-down" and thus emphasizes the building of capacity among users (it has also been described as the meeting of top-down and bottom-up, as government certainly can have a major role in setting up frameworks to facilitate engagement). Second, IWRM encourages cross-sectoral, interdisciplinary management of water resources (i.e., it is integrative across environmental resources). Finally, it encompasses management of other activities (e.g., land use) which affect water resources (i.e., it is focused on solutions).

Since the Rio Earth Summit, the Commission on Sustainable Development in its 1994, 1998 and 2000 sessions and in the 1997 UN General Assembly Special Session called for a concerted effort to develop more integrated approaches to water management. The need to ensure better participation of the poor, women and other marginalized groups was also identified as specific priorities. The 2nd World Water Forum in The Hague (2000) reiterated the recognition that IWRM is the best way for countries to deal with water issues in a cost-effective, sustainable and equitable way. The 3rd World Water Forum (March 2003) sought to contribute to the sharing of knowledge in the operationalization of IWRM.

2. Strategic Management for National SD Strategies

The introduction of sustainable development to government or the private sector raises difficult management challenges because the concept is multi-faceted and broadly-defined. These challenges, however, are not unique. Governments and corporations have faced them before when they have integrated new values into their policies and organizations (e.g., gender equity, occupational health and safety, results-based management). The success of this integration is typically a function of process aspects such as leadership, planning, implementation, and monitoring and review.

The latter represent some of the fundamental tenets of strategic management. Research conducted on national sustainable development strategies over the last few years has identified strategic management as a new pattern of governance and policy making. For example, Dalal-Clayton and Bass (2002) in compiling a resource book for sustainable development strategies, describe being strategic as "developing an underlying vision through consensual, effective and iterative process; and going on to set objectives, identify the means of achieving them, and then monitor the achievement as a guide to the next round of this learning process." Their research found that nations appear to be transitioning from "misconceptions of ideal and static master plans and one-off initiatives," to "sets of co-ordinated mechanisms and continuing processes of monitoring, learning and improvement." From these findings, the researchers articulated a continuous improvement approach to managing sustainable development strategies (Figure 2-1).

Steurer and Martinuzzi (2004) in an analysis of national sustainable development strategies in Europe, built on the work of Dalal-Clayton and Bass (2002) as well as the work of other strategic management thinkers, most notably Mintzberg (1994). Steurer and Martinuzzi (2004) put for the notion of strategic public management (SPM) as a new pattern of governance and policy-making. They note that this shifting pattern of governance away from "grand planning schemes to adaptive strategy processes, from authorities to competencies, from pure hierarchies to a combination of hierarchies and networks, from control to monitoring, evaluation and feedback, and from knowing to learning are promising steps in the right direction." They conclude that compared to "rigid policy planning schemes in the past," strategic public management "is certainly an important step forward."

Figure 2-1. The continuous improvement approach to managing sustainable development strategies (Dalal-Clayton and Bass 2002). The simplified four-part strategic management model used in this report is superimposed.
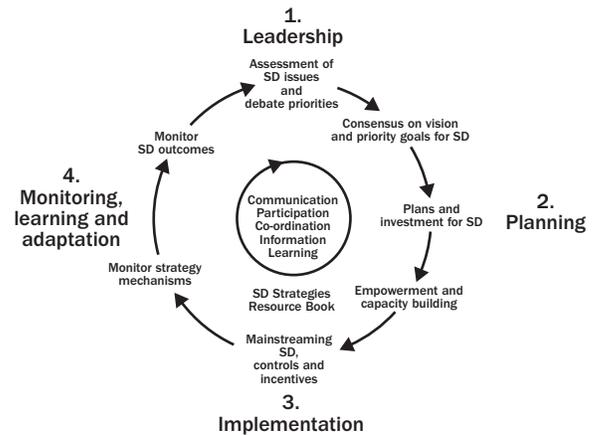
For purposes of this report, we organize our presentation and analysis around the fundamental tenets of strategic management which we broadly articulate as follows:

- *Leadership* – "developing an underlying vision through consensual, effective and iterative process; and going on to set objectives";

- *Planning* – identifying the means of achieving objectives (institutional mechanisms, programmatic structures and specific policy initiatives);

- *Implementation* – employing and financing a mix of policy initiatives; and

- *Monitoring, learning and adapting* – development, monitoring and reporting of indicators to measure: 1. progress in implementing policy initiatives; and 2. the economic, social and environmental state of the nation. Also includes formal and informal feedback mechanisms to ensure that monitoring results continually inform the adaptation of leadership, planning and implementation.

Additionally, we focus on two of the cross-cutting aspects of strategic management as identified in Dalal-Clayton and Bass (2002), namely co-ordination (e.g., with other strategy process, other levels of government, financing mechanisms) and multi-stakeholder participation.

IWRM Feature 2. Learning from IWRM: Learning about Strategic Management from IWRM Efforts

Jønch-Clausen (2004) with the Global Water Partnership articulated the "Integrated Water Resources Management Cycle" at the 2004 meeting of the Network of Asian River Basin Organizations (NARBO) in Indonesia. In the cycle depicted below, we also superimpose the strategic management aspects of leadership, planning, implementation, and monitoring & review.

"Uganda and Burkina Faso, India, China, Nicaragua and others have already integrated IWRM in their policies and water laws. They are continuing the IWRM process and review the status at regular intervals in order to deal with new or additional priority water resources issues, management requirements and infrastructural requirements (Jønch-Clausen, p. 7)."

Monitoring and Review

Leadership

Monitor and Evaluate Progress
Indicators of progress toward IWRM and water infrastructure development framework

Establish Status and Overall Goals
Water resource issues

Goals and progress towards IWRM framework

Recent international developments

Build Commitment to Reform Process
Political will

Awareness

Multi-stakeholder dialogue

Analyze Gaps
WR management functions required

Management potentials and constraints

Implement Frameworks
IWRM framework

Framework for water infrastructure development

Build capacity

Build Commitment to Actions
Political adoption

Stakeholder acceptance

Identify financing

Prepare Strategy and Action Plan
Enabling environment

Institutional roles

Management instruments

Links to national policies

Planning

Implementation

3. Challenges, Approaches, Tools and Innovations

In this section we present a synthesis of challenges along with approaches and tools, and innovative examples from the country case study research. This information is presented in relation to the fundamental tenets of strategic management as described in Section 2. An overview, or roadmap of the challenges studied in this section is presented below in Figure 3-1.

Figure 3-1. Roadmap to the challenges identified and analyzed in Section 3 of this report.

1. Leadership
• Type of strategy approach
• Demonstrating commitment and focus
• Incorporating the inter-generational SD principle
• Incorporating the interdependency SD principle

Co-ordination
• With budget processes
• With other strategies
• With other levels of government

Participation
• Institutionalizing participation
• Building trust

4. Monitoring
• Tracking progress toward strategies
• Understanding SD trends
• Learning and adaptation

2. Planning
• Legal basis
• Institutional basis
• Policy assessment

3. Implementation
• Accountability
• Financing
• Mix of policy initiatives

We use the term innovation somewhat loosely in the sections that follow. Generally, our criteria for selecting innovative approaches and tools from the country case studies included those not yet existing anywhere else,

those likely to be successful, and/or those that provide new perspective on how to approach old problems.

3.1 Leadership

Leadership is perhaps the most critical aspect of strategic management. Through a consultative process, it provides the vision for development activities and services. At its foundation, leadership must be grounded in the fundamental principles of sustainable development, that is, it must represent both existing and future generations, and it must understand the interdependency among economic, social and environmental systems. Some of the characteristics of leadership that can be gleaned from national SD strategy guidelines prepared by UN DESA (2002) and OECD-DAC (2001) include the following:

- people-centered approach;
- strong political commitment;
- consensus and long-term vision;
- sound leadership and good governance;
- comprehensive and integrated (economic, social, and environmental; inter-generational consideration);
- shared strategic and pragmatic vision;
- comprehensive and reliable analysis;
- linking short-term to medium and long-term;
- country led and nationally owned;
- effective participation; and
- realistic and flexible targets.

Table 3-1. Leadership challenges, approaches and innovations.

Challenges	Approaches and Tools	Examples and Innovations
Choosing approaches for the strategy process	• Comprehensive strategy (15 countries) • Cross-sectoral strategy (4 countries) • Sectoral strategies (Canada) • Integration with existing planning process (Mexico)	• U.K., Philippines • Cameroon and Madagascar PRSPs • Canada • Mexico
Demonstrating committment and focus	• Quantified and time-bound objectives (7 of 19 countries) • Constitutional provisions	• Germany • Switzerland
Inter-generational principle of SD	• Long-term objectives	• Sweden, Denmark
Addressing the linkages between economic, social and environmental sustainability	• Integrated policy assessment • Strategic sustainability assessment • Cross-cutting strategy objectives	• U.K • Switzerland • Germany

Note: some countries pursued more than one strategy approach.

From the case study research, some of the key challenges facing countries with regard to managing leadership aspects are summarized in Table 3-1 along with a listing of some of the key approaches or tools and innovations that were observed. This information is discussed in more detail in the sections that follow.

3.1.1   Approaches for the Strategy Process

The country research demonstrated that the particular approach used to frame the national SD strategy process is not very straightforward. This is evidenced by the range of approaches used by the 19 countries studied. Four types of approaches emerged from the country research:

- *Comprehensive, multi-dimensional SD strategy* – A single document and process that incorporates economic, social and environmental dimensions of SD. This approach is most commonly associated with the term National Sustainable Development Strategy (NSDS) or national Agenda 21. Ten countries framed their national strategy using an NSDS-like approach including four developing/transitional (South Africa, India, Poland and Costa Rica) and six developed countries (Switzerland, Sweden, U.K., EU, Germany and Denmark), while five developing/transitional countries framed the strategy process using an Agenda 21 approach (Philippines, China, South Korea, Brazil, and Costa Rica – in progress).

- *Cross-sectoral SD strategies relating to specific dimensions of SD* – A strategy that spans multiple sectors and covers one or two dimensions of sustainable development, e.g., national environmental management plans or poverty reduction strategy papers. Five countries pursued this type of approach including four developing countries (South Africa, Madagascar, Cameroon and Morocco) and one developed/transitional country (South Korea).

- *Sectoral SD strategies* – A strategy that incorporates economic, social and environmental dimensions of SD, but that is focused on a specific sector (e.g., SD strategy for a ministry of transportation). Canada is the only country that has pursued this approach as the primary strategy means. Some countries, such as the U.K. and Mexico also produce departmental-like sector strategies, but as a subset of a national strategy.

- *SD integration into existing national development strategies* – A separate SD document is not prepared, but rather, the conceptual framework of SD is integrated directly into an existing national development planning document and process. Mexico is pursuing this strategy approach, as has India.

A timeline depicting the emergence of these strategy processes in the 19 countries studied is shown on Figure 3-2. One observation that can be made from this presentation is that some countries have pursued more than one strategy approach either simultaneously or at different times. For example, Costa Rica also has a National SD Strategy document prepared in 1989, but is currently pursuing a bottom-up approach through demonstrated Local Agenda 21 projects to "pave the way" for a National Agenda 21—or National Sustainable Human Development Plan as it is more formally referred to. South Korea has also pursued a National Action Plan for Implementation of Agenda 21. Eight countries have explicitly called their approach a national SD strategy.

Comprehensive, Multi-dimensional SD Strategy

The strategy approach most common in the case studies was the comprehensive, multi-dimensional SD strategy. In several instances, the comprehensive strategy was more of a compilation of existing economic, social and environmental strategies and policy initiatives for presentation at WSSD. However, in many instances, this strategy approach was more purposeful in providing a framework for articulating national strategic and co-ordinated action toward SD. Particularly good examples of comprehensive national SD strategies were observed in the U.K. and the Philippines.

The U.K.'s national strategy provides a long-term perspective of the key SD challenges facing the country, and presents options for addressing priority issue areas. The strategy is described as a catalyst for change, and provides a framework to guide policy development and decision-making. The overarching goal of the strategy is to ensure "a better quality of life for everyone, now and for generations to come." (U.K. Government 1999).

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4   Some countries choose to call their strategy process a national Agenda 21 in relation to Agenda 21—a program of action for sustainable development worldwide—introduced at the 1992 World Conference on Environment and Development.

Figure 3-2. Timeline of national SD strategies.
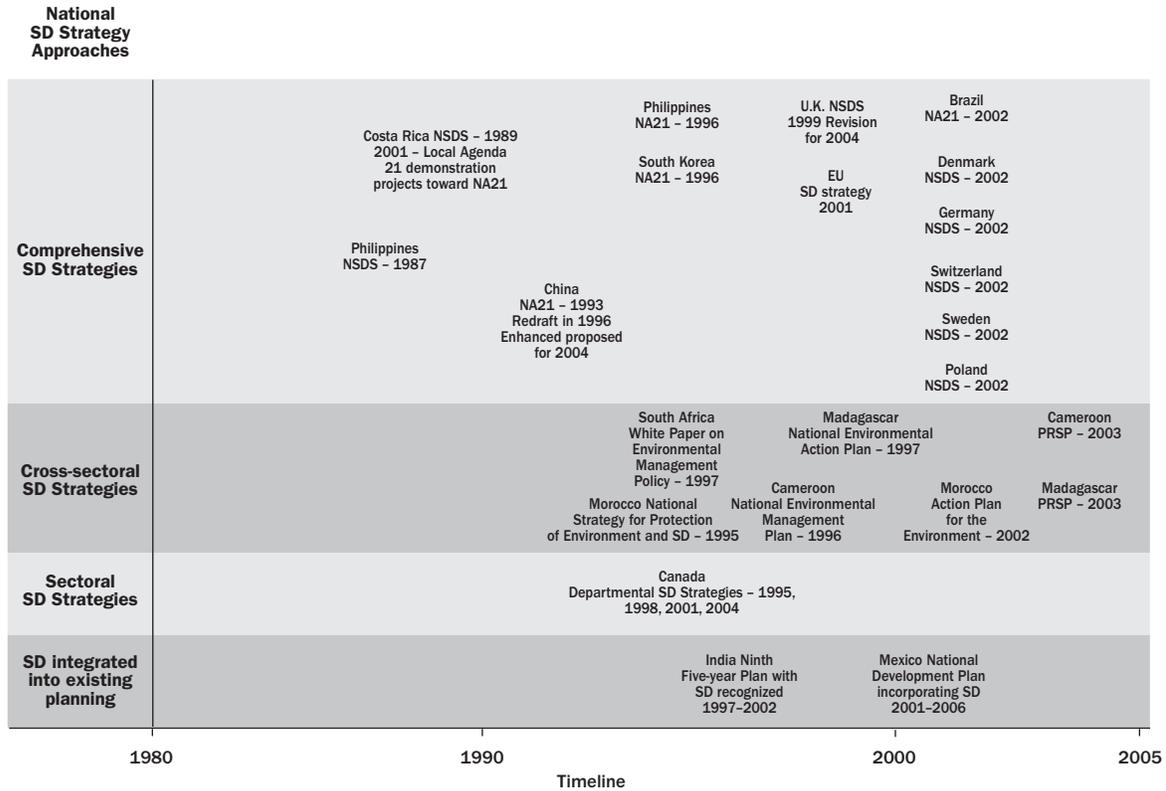
The U.K. strategy has four main objectives:

1. social progress which recognizes the needs of everyone;

2. effective protection of the environment;

3. prudent use of natural resources; and

4. maintenance of high and stable levels of economic growth and employment.

The objectives are supported by a set of headline indicators and targets, as well as a set of 10 guiding principles and approaches. The strategy also commits the government to establishing an integrated system of impact assessment and appraisal tools, to be used during the policy development and review process.

The U.K. strategy is comprehensive in its approach, outlining the underlying goals of sustainable development and committing the government to establishing new decision-making processes, institutions, instruments, partnerships and communication processes. The document establishes concrete objectives and targets, and outlines options for achieving desired outcomes. The strategy is balanced and applies equal attention to environmental, economic and social challenges.

The Philippine Agenda 21 (PA 21)[5] aims at introducing an ecosystem-based and people-centered approach for development in the Philippines. Similar to the U.K. strategy, it envisions "a better quality of life." It is structured along three major axes: the Principles of Unity (chapter 1), the Action Agenda (chapter 2) and the Implementation Strategies (chapter 3). The first chapter presents 15 SD guiding principles, namely:

- Primacy of Developing Full Human Potential;

- Holistic Science and Appropriate Technology;

- Cultural, Moral and Spiritual Sensitivity;

- Self-Determination;

- National Sovereignty;

5 Philippine Agenda 21: http://pcsd.neda.gov.ph/pa21.htm

- Gender Sensitivity;

- Peace, Order and National Unity;

- Social Justice, Inter-, Intra-Generational and Spatial Equity;

- Participatory Democracy;

- Institutional Viability;

- Viable, Sound and Broad-Based Economic Development;

- Sustainable Population;

- Ecological Soundness;

- Bio-geographical Equity and Community-Based Resource Management; and

- Global Cooperation.

PA 21 is based on the key concepts of integration, multi-stakeholder participation and consensus building, and operationalization to be applied to five ecosystems (i.e., forest/upland, agricultural/lowland, urban, coastal/marine and freshwater ecosystems). Two extra sections of the strategy call for an improved management of biodiversity and mineral resources. The strategy provides, for the critical issues of SD for the next 30 years, implementation strategies, as well as, time-bound qualitative and process related targets, in relation to the institutions involved. Action measures are categorized into short-term 1996–1998; medium-term 1998–2005 and long-term 2005–2025

It adopts two-pronged strategies to map out the action agenda: creating the enabling conditions to (a) assist the various stakeholders to build their capacities towards SD and (b) direct efforts at conserving, managing, protecting and rehabilitating ecosystems. Managing the transition to SD calls also for interventions across ecosystems: integrating SD in governance, providing enabling economic policies, investing in human and social capital, mapping out a legislative agenda, and addressing critical and strategic concerns (population management, human health, food security, human settlements and land use).

The last chapter identifies the key players and presents the next steps for action including the process of localizing PA 21, a short-term plan for Information, Education and Communication on SD (1996–98) aiming to create an environment conducive to the pursuit of PA 21 through co-ordination of well-informed key segments of society. The executive branch and legislative branch at the national level and the local government units are

responsible for this program in terms of mobilizing society, facilitating participation, providing advocacy to local government units and enacting policies that integrate SD. Finally, a description of possible financing means including market-based instruments and command and control measures are proposed.

Cross-sectoral SD Strategies

An interesting example of a country pursuing a cross-sectoral strategy process is Cameroon. Cameroon has initiated several processes that relate to the three dimensions of sustainable development. Most notable of these are the National Environmental Management Plan (NEMP), the poverty reduction strategy paper (PRSP), the National Program on Good Governance, the National Plan for the Fight against Corruption, and a national strategic plan addressing HIV AIDS. The NEMP is officially cited by the government of Cameroon as its national sustainable development strategy process and has been the focus of several recent WSSD preparatory reports and assessments. However, country research for Cameroon focused on the PRSP process and document because the PRSP has just recently been completed, and contains some innovative features that were not a part of the NEMP.

PRSPs describe a country's macroeconomic, structural, and social policies in support of growth and poverty reduction, as well as associated external financing needs and major sources of financing. (PRSP 2003, p. 1). The papers are required by eligible countries of the initiative for Heavily Indebted Poor Countries (HIPC) in order to be eligible for debt relief. Cited as "debt relief for sustainable development," PRSPs implement integrated programs for poverty reduction and economic reform (World Bank 2004).

Cameroon's PRSP cites a number of strategic focus areas for attacking poverty. Framed within these focus areas are 14 policy fields as illustrated in the tablet on the following page. For these 14 policy fields the PRSP presents a total of 193 specific measures each with a target date for achievement.

Sectoral Strategies

The Canadian approach appears unique from the sample of 19 countries. Rather than create a single, national strategy for the federal government, Canada has assigned responsibility for sustainable development to individual government departments and agencies. This responsibility is laid out under the *Auditor General Act*, which requires 25 departments to submit to Parliament individual Sustainable Development Strategies every three

Cameroon Poverty Reduction Strategy Paper Priorities

Priority	Policy Fields
Promotion of a stable macroeconomic framework	· Macroeconomic and budgetary framework · Pursue the implementation of the action plan for improving management of public expenditure · Continue structural reforms · Mobilize non-oil internal income
Strengthening growth through diversification of the economy	· Development of the rural sector · Development of the industrial sector · Development of tourism, cultural services and support services for the productive sector
Energizing the private sector	
Development of economic infrastructure and natural resources	· Development of basic infrastructure · Development of telecommunications and the technologies of information communications · Management of natural resources
Strengthening and enhancing human services	· Implementation of the education strategy · Implementation of the health strategy · Other social development and health strategies · Reduction of urban poverty
Improvement of the institutional framework and governance	

years (four more departments and agencies prepare such strategies on a voluntary basis). Government departments responsible for specific sectors are responsible for identifying issues of relevance to their mandate, and in developing policies, regulations and other instruments for achieving specific SD objectives. It complemented this process in 2003 through a draft document outlining progress toward a federal SD strategy and on co-ordination of departmental SD strategies. The third round of strategies were submitted in February 2004, and take into consideration several significant events that have occurred over the previous three years, including the World Summit on Sustainable Development and Canada's ratification of the Kyoto Protocol.

The disadvantage of this approach as noted in the Canada case study was the co-ordination among departmental strategies. However, despite the difficulties in co-ordination, the overall process has fostered deep learning within the government—particularly with respect to raising the overall awareness of sustainable development within each of the 29 departments.

Guidelines for departmental strategies include the requirement that each strategy contain (Government of Canada 1995):

Departmental Profile

- Identification of what the department does and how it does it.

Issue Scan

- Assessment of the department's activities in terms of their impact on sustainable development.

Report on Consultations

- The perspective of clients, partners and other stakeholders on departmental priorities for sustainable development and how to achieve them.

Goals, Objectives and Targets

- Identification of the department's goals and objectives for sustainable development, including benchmarks it will use for measuring performance.

Action Plan

- How the department will translate its sustainable development targets into measurable results, including specific policy, program, legislative, regulatory and operational changes.

Measurement, Analysis and Reporting of Performance

- What mechanisms the department is establishing to monitor and improve performance.

Integration of SD into Existing Planning Processes

Mexico is another somewhat unique case. Mexico does not have a comprehensive, multi-dimensional sustainable development strategy, but does have other mechanisms in place that meet some of the requirements of a sustainable development strategy. The National Development Plans are six-year programs established by the Mexican President at the beginning of the presidential term. The plans are intended to provide systematic and co-ordinated economic, social, political and cultural development.

The National Development Plan 2001–2006 contains strategies for the achievement of objectives related to the environment and the promotion of sustainable development. Unlike previous plans prepared under other administrations, the current plan provides both short- and long-term visions, that define the major challenges and characteristics Mexico should hold in the next 25 years. Democracy, transparency, high quality of life, leadership, dynamism, multicultural pride, human developing opportunities and promotion of human rights as a fundamental value of co-existence, are some of the main elements of this future vision (OECD 2003, p. 123).

Mexico's National Development Plan 2001–2006 has three main objectives:

1. *Social and Human Development:* improve the well-being of the population, develop education, ensure equity, and strengthen human capital and government capacity;

2. *Growth with Quality:* develop the national economy, increase competitiveness, promote balanced regional development and create conditions for sustainable development; and

3. *Order and Respect:* improve co-operation among authorities, make progress towards decentralization, fight corruption, govern with transparency, and guarantee public security and justice (OECD 2003, p. 123 and 126).

Every Secretariat (government department) develops a national sectoral program consistent with the President's National Plan and based on its own long-term (25-year) strategic outlook. Sectoral programs serve as policy guides, specifying goals and strategies in each sector to be implemented during the next six years. Under the new direction of the National Development Plan, the commitment of sustainable development is shared by the diverse Secretariats and

federal agencies in charge of the different sectors of economy. These agencies are responsible for promoting sustainable development in their activities and programs through specific actions and goals.

Strengths of the National Development Plan include its attention to short- and long-term visions for the country. The Plan also acts as the source document for all sectoral programs which then include specific goals for achieving sustainable development that are relevant to their mandate. A weakness in this approach of integrating SD directly into the existing planning process is that the SD strategies are not as detailed as compared to the comprehensive strategies (e.g., National Agenda 21s, National SD Strategies).

India has pursued a similar approach. Planning is an important steering instrument of India's democracy. It is based on an iterative process involving interaction between the centre, the state and the local bodies. Multiple stakeholders participate in the planning process. Working groups and task forces are established to prepare plans and reports for various sectors. The Ninth Five-Year Plan (1997–2002) explicitly recognized the synergy between environment, health and development and identified as one of its core objectives the need for ensuring environmental sustainability of the development process through social mobilization and participation of people at all levels (MoEF 2002:16)." Following WSSD, the Indian government initiated a process of preparing and implementing a national strategy for sustainable development by 2005.

IWRM Feature 3. Learning from IWRM: Provincial-level Water Strategies and Policies in Canada

Most provinces in Canada have developed a water strategy or policy to guide their water management. For example, the provinces of Alberta, Saskatchewan, Manitoba, Ontario and Quebec all include specific governance mechanisms in their policies to guide the implementation of watershed-based integrated water resource management. They typically included a nested set of watershed-based boards with regional and local sub-boards. These frameworks and strategies are consistent with various integrated water resources management principles, including the emphasis on ample reporting; open and broad public and stakeholder participation; local leadership; outreach and education; and planning, management, and risk assessment frameworks that are dynamic and flexible enough to respond to changes within the watershed. Three specific examples of recent provincial water strategies are described here:

Quebec Water Policy:

In the fall of 2002, the Québec government introduced the Quebec Water Policy to protect water sources, manage water sustainably and protect public health and ecosystems. Governance reform is a central part of Quebec's water policy. One of the proposed reforms focuses on implementation of watershed-based management, which includes gradually introduced integrated watershed-based management and provision of financial and technical support for the establishment of 33 watershed agencies. Each Watershed Agency is tasked with developing a Master Plan for Water for their respective watershed. Subsequently, each Watershed Agency will also develop a Watershed Agreement derived from their corresponding Master Plan.

Alberta Water Strategy:

In November 2003, the Government of Alberta released its new water management strategy, entitled Water for Life: Alberta's Strategy for Sustainability. It sets out to develop a new water management approach and outline specific strategies and actions to address the province's water issues by implementing a watershed and source protection framework. It also recommends a shift to shared governance through a network of partnerships, with Alberta Environment as the lead agency. As part of the strategy, a provincial Water Advisory Council has been established to investigate water use issues and to develop policies to improve the long-term management and protection of Alberta's water resources.

Ontario White Paper on Source Water Protection:

On February 12, 2004, the Government of Ontario released a *White Paper* on Watershed-based Source Protection Planning for public consultation. It proposes: 1) An approach for the development of a watershed-based source water protection program; 2) A legislative framework for the development and approval of source water protection plans; and 3) Ways to enhance Ontario's management of water takings. the White Paper provides the general framework and outline of Ontario's plans for source water protection legislation.

Source: Water Policy and Co-ordination Directorate, Environment Canada.

3.1.2 Demonstrating Commitment and Focus

While there are certainly many ways to demonstrate commitment (e.g., political, financial), setting pragmatic objectives to help focus the national SD strategy is one important means of demonstrating both com-

mitment and focus. A specific approach in this regard as seen in the country research is the development and presentation of measurable and time-bound objectives. We could identify seven of 19 countries whose SD strategy process employed measurable and/or time-bound objectives, although the degree of specificity varied considerably. These countries included a mix of developing and developed countries including Madagascar, Cameroon, Denmark, U.K., Canada, Poland and Germany. In many cases the objectives are process-related, that is, pertaining to the implementation of a particular program or policy initiative, rather than pertaining to the state of the economy, society or environment.

Germany was one country which appeared to stand out with regard to commitment and focus through its 21 indicators, most of which are quantified and have time-bound targets over the period 2010–2020. These indicators serve as a benchmark for compliance with a series of management rules. Most indicators are objectives, but the degree of achievement is also used for indicating the progress towards SD. The indicators cover the spectrum of priority economic, ecologic and social policies, i.e., fiscal, economic, education, research, housing, spatial planning, crime prevention, energy and environment. For example, increasing energy and resource efficiency is one of the most important objectives. According to the strategy, by 2020 energy and resource productivity shall be doubled. The share of renewable energies in the energy supply shall be doubled by the year 2010. Other objectives refer to social issues, such as making full-time child care facilities available for 30 per cent of children (currently three per cent).

Another approach observed to demonstrate commitment and focus is through constitutional provisions. Switzerland and Sweden are particularly good examples of this. For example, underpinning Switzerland's Sustainable Development Strategy 2002 is the new Federal Constitution of 1999, which elevates sustainable development to the status of a national goal. The new Federal Constitution further imposes a binding requirement for sustainability action on all levels of government, as well as incorporating sustainable development into its foreign policy goals. Similarly, the EU Treaty makes reference to SD in its Article 2.

3.1.3 Inter-generational Principle of Sustainable Development

Inter-generational equity is a fundamental principle of sustainable development. While most strategies acknowledged the inter-generational principle of SD,

few strategies explicitly incorporated it. One approach for beginning to incorporate this principle is consideration of an inter-generational timeframe in the strategy process. Based on this study, European countries appear to be key innovators in this regard including Sweden, Denmark and Germany, but other countries such as the Philippines and Mexico have adopted inter-generational time-frames in their strategy processes as well.

Sweden's approach was to adopt an inter-generational timeframe for the strategic management process. For example, the objectives in their national SD strategy extend to cover one generation (i.e., 25 years). For instance, the strategy includes a vision for the future, which "should remain valid for a generation" while at the same time acknowledging that the measures within the eight core areas may need to be reassessed at more frequent intervals (Swedish Government 2002, p. 7). Specifically, the "overall objective of environmental policy is to hand over a society to the next generation in which the major environmental problems have been solved" (Swedish Government 2002, p. 20).

In Denmark, the Danish Government introduced the move towards sustainable development as a long-term process with corresponding objectives and benchmarks within a 20-year timeframe. Similarly, Germany's national SD strategy proposes 21 indicators, most of which are quantified and time-bound, pending from 2010 to 2020.

3.1.4 Addressing the Linkages among Economic, Social and Environmental Sustainability

Based on review of the country research it is fair to say that while inclusion of economic, social and environmental dimensions was common among most of the strategies, an understanding of specific and pragmatic linkages among economic, social and environmental dimensions in all strategies studied is only at its infancy. The simple inclusion of all SD dimensions in one strategy does not necessarily make it an integrated strategy. For sustainable development, it is critical that all objectives and specific initiatives implemented in a strategy are predicated by a mental mapping of the positive and negative feedbacks that could potentially unfold among economic, social and environmental systems.

The cross-sectoral strategies by definition focused on one or two dimensions of SD. The national environmental strategies researched were all sophisticated in their understanding of SD principles despite their single dimensional focus, but were typically weak in understanding the linkages with the social and economic dimensions. The PRSPs studied in Cameroon and Madagascar, while considering social and economic aspects, included little in the way of environmental strategies. Additionally, while the notion of rapid and sustainable development is cited as a principal tenet of the PRSPs, it does not appear to be based on a holistic understanding of SD.

Some of the tools that emerged from the country research that would be helpful in improving the understanding of linkages and, in turn, translate into actions that truly integrate all dimensions of SD, include integrated policy appraisal (IPA) pursued in the U.K. and Strategic SD assessment as used in Switzerland. Strategic environmental assessment (SEA) is another tool in this regard and is described further in the Planning challenges highlighted in Section 3.2, although SEA is inherently focused on the environmental dimension. The U.K.'s IPA process is designed to assist government departments in assessing the total potential impact of policy proposals. It draws on existing appraisal requirements, and assists departments in identifying the links between environmental, social and economic impacts. IPA is to be used at both the policy development and implementation stages, and can also serve as an evaluation framework during the review process. In 2002, seven departments pilot-tested the integrated policy appraisal process (U.K. Government 2003b). IPA includes the following assessment categories (U.K. Government 2003b):

- Public Expenditure and Economic Impacts
- Environmental Appraisal
- Regulatory Impacts
- Policy Appraisal for Equal Treatment
- Rural Proofing
- Climate Change
- Health Impact Assessment

Establishing cross-cutting SD strategy objectives is another means of helping to improve the understanding of SD linkages. For example, in the German Strategy, rather than follow the traditional three-pillar framework, defined the integration challenge in terms of four cross-cutting co-ordinates for policy action, namely: fairness to different generations; quality of life; social cohesion; and international responsibility. The strategy then elaborates on measures to be taken into account for reaching these broad qualitative objectives.

IWRM Feature 4. Learning from IWRM: Understanding Linkages for Water Resource Management

"There is only one way: Ecosystems for water; water for people; ecosystems for people."

Philippe Roch, Director
Swiss Agency for the Environment,
Forests and Landscape

Christian Furrer, Director
Swiss Federal Office for Water and Geology

The Swiss plan for Integrated Water Resources Management was introduced in April 2004 and aims to bringing together three principal sectors: flood protection; water use; and water protection

It is fully recognized that measures in one sector will impact on the others and that upstream actions will be felt downstream. Therefore, the spatial reference for integrated water resources management is the catchment area or river/lake/groundwater basin, rather than the political or administrative borders. This approach is integrated as it takes account of other activities impacting on water resources such as spatial planning and agriculture.
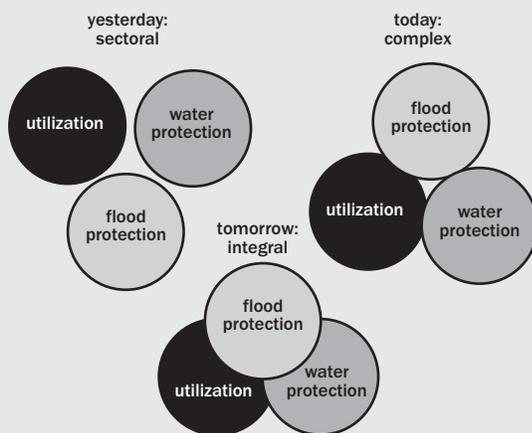
Switzerland 2004. Integrated Water Resources Management: Practice in Switzerland. Swiss Agency for the Environment, Forests and Landscape International Affairs Division.

3.2   Planning

Planning of policies, programs and projects is the second stage of the four-part strategic management model employed in this study. Planning is a part of the strategic management cycle that governments have the most experience with. Some of the characteristics of national SD

strategies as outlined in the UN DESA and OECD-DAC guidelines that are relevant to the planning stage include:

- strong institution or group of institutions heading the process;

- linking national, regional and local levels;

- comprehensive and reliable analysis;

- coherence between budgets and strategy priorities;

- building on existing mechanisms and strategies, and on existing knowledge and expertise;

- develop and build on existing capacity; and

- effective participation.

Summarized in Table 3-2 are some of the challenges faced, and approaches and tools used in the planning stage of the national SD strategy process based on the 19 country case studies.

3.2.1   Legal Basis

Establishing a legal basis requiring the existence of a national SD strategy process is important for ensuring the longevity of the process. For the 19 countries studied, we could identify only three countries which had a clear legal mandate for the SD strategy process. These countries included Canada where under the *Auditor General Act*, departments are required to submit to parliament individual Sustainable Development Strategies, and Madagascar and South Korea where legal mandate was provided under national environmental acts.

Surprisingly, of the 14 comprehensive and multidimensional SD strategies studied, none were given legal mandates. The next closest to a legal mandate could perhaps be seen in the EU and Mexico. In the EU, requirements existed to integrate sustainability issues in the Union's policies as laid down in Article 6 of the Treaty of the Union. In Mexico, the constitution required preparation of national development plans and the Ecology Law required environmental considerations, but there is nothing explicitly requiring integrating SD principles into Mexico's National Development Plan.

3.2.2   Institutional Basis

In most of the cases studied, environment departments still take responsibility for co-ordinating the development of the SD strategies, with many countries employing inter-departmental committees chaired by the environment department.

Table 3-2. Planning challenges, approaches and innovations.

Challenges	Approaches and Tools	Examples and Innovations
Legal basis	• Enactment as law	• Canada, EU, Mexico
Institutional basis	• Green Cabinet • Home outside of environment departments • Inter-departmental Commission	• Germany, U.K. • Philippines, China, Sweden • Switzerland
Policy assessment	• Strategic Environmental Assessment (8 countries) • Strategic Sustainability Assessment • Integrated Policy Assessment	• EU • Switzerland • U.K.

A mix of approaches and tools were employed to meet the challenges posed by the need for an institutional home for the SD strategy process. In Germany and the U.K., Green Cabinets were established. In Germany, the process is managed and co-ordinated by the Chancellor's Office which has greater authority to demand input and resolve conflicts than line ministries. At the Cabinet level in the U.K., sustainable development policy is co-ordinated by the Cabinet Committee on the Environment. In addition, each department designates a Green Minister to sit on the Cabinet Sub-Committee of Green Ministers. Each Green Minister is responsible for ensuring that environmental and sustainable development considerations are integrated into their departmental strategies and policies.

A few countries had agencies outside the environment sphere act as the institutional home for the SD strategy process. In the Philippines, the nerve centre for SD activities is the Philippines Council for Sustainable Development (PCSD) which is chaired by the National Economic Development Authority (NEDA). In China, the Administrative Centre for China's Agenda 21 (ACCA21) was established to facilitate the implementation of China's Agenda 21 and sustainable development in China and is affiliated with the Chinese Ministry of Science and Technology and the State Development Planning Commission. In Canada, the Office of the Auditor General, while not responsible for co-ordinating the SD strategy process, plays a significant role in providing advice to the departmental strategy process through its audit reports and recommendations.

In Sweden (as in most countries), the Ministry of Environment had a co-ordinating role with the entire government being responsible for development and implementation of the strategy. To help focus this

responsibility, Sweden is now embarking on the creation of a Secretariat for Sustainable Development, to be located in the Prime Minister's office (Knutsson 2004).

Although many countries have some form of inter-departmental commission or committee, Switzerland's Inter-departmental Committee (IDA Rio) appears particularly noteworthy as it is responsible for overseeing the lifecycle of the strategy—from development, through implementation, and monitoring and reporting. To facilitate the implementation of the commitments entered into at Rio, in March 1993, the Federal Council set up the IDA Rio. Responsibilities of IDA Rio include: ensuring the coherence of the policies of the various federal agencies; analysing assessments on behalf of the Federal Council; submitting proposals for improvements, if necessary; defining common principles for the provision of information and communication regarding the strategy and the measures in question. Although its secretariat is housed within the Department of Environment, Transport, Energy and Communications, it is accountable to the Federal Council.

3.2.3 Policy Assessment

One challenge in the implementation of an SD strategy is how to ensure that the general principles of SD and the main objectives of the strategy are being mainstreamed into specific policies, plans and projects that are being developed and proposed on an ongoing basis. One approach that has emerged over the years is strategic environmental assessment, an institutional policy instrument designed to assess policies that are to be submitted to cabinet for their potential environmental impacts.

Of the 19 countries studied, eight are using SEA at the national level including Canada, Denmark, EU, South

Africa, Poland, the U.K. and Switzerland. Of these countries, Switzerland and the U.K. appear to be the only countries that are employing a broader form of strategic sustainability assessment. Sweden requires SEA for municipal programs, but not at the national level. South Korea is making preparations for implementing SEA. For the EU, there is a European Directive requiring the transposition of SEA into national law in June 2004. For a recent and comprehensive discussion on trends and experiences in SEA, readers are referred to IIED (2004).

The U.K.'s Sustainable Development in Government Initiative has introduced Integrated Policy Appraisal— described previously in Section 3.1.4. Swiss government officials indicated that in response to Measure 22 in the strategy, guidelines on completing "sustainability assessments" have been written. The concept of sustainability assessment is to evaluate anticipated effects of draft legislation, concepts and projects in terms of the three dimensions of sustainable development and to indicate potential deficiencies early enough in the process to influence the direction taken. These guidelines have been tested on a number of initiatives. The guidelines are already well accepted within the Department of Environment, Transport, Energy and Communication. Ultimately, it is hoped that these guidelines can be used throughout the Swiss government in other sectors (Wachter 2004).

IWRM Feature 5. Learning from IWRM: Planning and Output Objectives for the EU Water Framework Directive

The EU Water Framework Directive sets out clear output targets for each of the requirements which adds up to an ambitious overall timetable. The key outputs and milestones are listed below.

Year	Issue	Reference
2000	Directive entered into force	Art. 25
2003	Transposition in national legislation	Art. 23
	Identification of River Basin Districts and Authorities	Art. 3
2004	Characterization of river basin: pressures, impacts and economic analysis	Art. 5
2006	Establishment of monitoring network	Art. 8
	Start public consultation (at the latest)	Art. 14
2008	Present draft river basin management plan	Art. 13

Year	Issue	Reference
2009	Finalize river basin management plan including progamme of measures	Art. 13 and 11
2010	Introduce pricing policies	Art. 9
2012	Make operational programs of measures	Art. 11
2015	Meet environmental objectives	Art. 4
2021	First management cycle ends	Art. 4 and 13
2027	Second management cycle ends, final deadline for meeting objectives	Art. 4 and 13

Source: EU Water Framework Directive

3.3   Implementation

Implementation is the third stage of the four-part strategic management model used in this study. Implementation was a major issue at the World Summit on Sustainable Development in 2002 and will continue to draw attention. The UN DESA and OECD-DAC guidelines for national SD strategies provide recommendations related to implementation. Some of these include building on existing capacity, providing coherence between budget, capacity, and strategic priorities, building partnerships, ensuring accountability, and linking efforts to the private sector.

A few of the key challenges identified from the 19 country case studies are highlighted below along with some of the approaches and tools used to address these challenges and some specific examples and innovations.

3.3.1   Responsibility

Establishing clear and co-ordinated responsibility for the implementation of policy initiatives set out in a national SD strategy is critical for progress. In all 19 countries studied, responsibility for implementing specific actions in the SD strategy was decentralized to individual ministries and agencies. Overall responsibility for implementation of the strategy was housed in the Ministry of Environment in most cases, either directly or indirectly through a co-ordinating committee or SD commission or council. Leaving responsibility for implementation with a department that does not have the authority to exert influence on other departments is not a strategic allocation of responsibility.

One approach for assigning responsibility observed in five cases was the shifting of responsibility for imple-

Table 3-3. Implementation challenges, approaches and innovations.

Challenges	Approaches and Tools	Examples and Innovations
Responsibility	• Shifting of responsibility to prime minister/president	• Germany, Mexico, South Korea, Cameroon
Financing	• Green Budgeting • HIPC debt relief • Donor co-ordination • Also, see Section 3.5 on co-ordination with national budgeting process.	• Costa Rica, Poland, Sweden • Cameroon, Madagascar • Madagascar
Mix of specific SD initiatives	• Action Plans • Expenditure policy initiatives • Economic policy initiatives • Regulatory policy initiatives • Institutional policy initiatives	• Denmark, Madagascar, EU, South Korea, • U.K., Morocco • Sweden, EU, U.K., Germany • South Korea • Philippines

mentation of the strategy to the president/prime minister's office. These were Germany, EU, Mexico, South Korea and Cameroon. In Germany, while implementation of specific initiatives is left to the ministries, implementation overall is the responsibility of the Federal Chancellor's Office. In the EU, responsibility rests with the European Council and Commission, and implementation of sectoral measures is delegated to European Generals. In Mexico, the President is responsible for the National Development Plan and each Secretariat is responsible for meeting the specific commitments in their sectoral program. In South Korea responsibility rests with the Office of the Prime Minister, and additionally, with the Presidential Commission on SD, while implementation of individual measures is responsibility of individual ministries or lead agencies. In Cameroon, implementation is co-ordinated by an Inter-ministerial Committee chaired by the Prime Minister.

3.3.2 Financing

Financing of specific initiatives in the national SD strategy suffers from two challenges. One is a simple lack of revenue for the implementation of policy initiatives and for the SD strategy process itself—a situation faced by developing and transitional counties alike. The other is poor or non-existent linkages between the national SD strategy and the national budget allocation process. The latter is discussed in detail in Section 3.5 in relation to overall strategy co-ordination. For the former, a number of approaches and tools were observed to help address the challenge and these were not just applicable to developing and transitional countries.

Generating revenues through ecological taxes and fees was observed in Costa Rica, Poland, Sweden, South

Korea and Brazil. Poland for example, faced with economical restructuring in times of recession and rising unemployment, initiated or promoted private and municipal investments that attracted attention as a model for financing important parts of sustainable development. A few key elements of this system were:

• Ecological fees in general – increasing taxes for petrol, energy etc., at the same time decreasing the value added tax.

• Specific ecological funds; general (environmental protection and water management funds) and specific (e.g., fund for protection of agroforestry areas). These funds have been financed by high pollution charges and fines, and redistributed to investments for pollution abatement.

• The "EcoFund" – so called debt-for-environment swaps with expected revenue between 2002 and 2009 at about US$335 million (OECD 2003, p.161).

• Commercial financial institutions, especially banks that extend ecological loans on market terms.

• Commercial institutions are included to the extent to which they let environmental credits and loans on terms better than market terms due to the support from the National Fund (e.g., Bank for Environmental Protection).

• Pre-accession aid funds from the EU.

• Foreign financial institutions and other aid programs (for example, the World Bank).

Additionally, in Costa Rica a system for payment of environmental services was created (Umaña 1999). It

was further described that a key component of this system was "the adoption, by decree, of a five per cent tax on fuels that was supposed to finance the local component of environmental services." This was a carbon tax that generated revenues to "pre-pay environmental services that could later be commercialized by the government to meet international demand."

Another approach for financing SD related initiatives was observed in the Cameroon and Madagascar PRSP process. As previously described, PRSPs are prepared by eligible countries of the initiative for Heavily Indebted Poor Countries (HIPC). For a country to complete the first stage of eligibility for HIPC debt relief, it must establish a three year track record of good performance and work with civil society to develop a PRSP. To complete the second stage and reach the decision point for debt relief, the country must build another track record by implementing a subset of policies that are linked to the PRSP.

An innovative donor co-ordination mechanisms was observed in the Madagascar case study. Since the creation of Madagascar's National Environmental Action Plan (PNAE), a large consortium of bilateral and multilateral donors has regularly contributed to the financing of the various phases of the environmental plan. The fact that every donor organization finances specific components of the PNAE has raised the need for effective donor co-ordination. Therefore, a Donor Secretariat was established in the Madagascar—financed by the World Bank and USAID and located in Washington DC. At first, its terms of reference were limited to environmental questions. The institution became the Multi-Donor Secretariat, now financed by a large number of bilateral donors.

Through the creation of a platform of institutionalized dialogue, the Donor Secretariat has proved to be an interesting mechanism for donor co-ordination and program development. The extension of its mandate and its involvement in multiple policy sectors has opened the way for policy integration: The fact that the Donor Secretariat deals both with the PNAE and the Action Plan for Rural Development—two key documents for SD—has facilitated the integration of the two processes. Despite innovative efforts for donor co-ordination, the case of the PNAE shows that the involvement of multiple donors continues to complicate co-ordination and imposes different forms of conditionality (UN 2002a).

IWRM Feature 6. Learning from IWRM: Financing for Integrated Water Resource Management in the Philippines

The Philippines' Agno River Basin Catchment area covers over 8,000 square kilometers. It is the fifth largest river basin in the Philippines with a population of more than four million. Three large hydro-electric dams are located in this catchment.

A mix of financial arrangements were used for the integrated management of water resources, including:

· Implementation of Energy Regulations

· Inclusion of Basin-related programs and projects in the budget of local government units and agencies

· Adoption of the Build-Operate-Transfer scheme

· A combination of local and foreign fund sources

Source: Benjamin D. de Leon, Executive Director, Agno River Basin Development Commission. Presented at the First General Meeting of the Network of Asian River Basin Organizations, Indonesia, 26 February 2004.

3.3.3 Implementing a Mix of SD Policy Initiatives

One of the challenges facing SD is that a proactive policy strategy requires that policy makers take account of the full range of instruments that can be brought to bear on the challenges of sustainable development (Gale *et al*. 1995). Annex 3 provides a summary of the specific SD policy initiatives featured in the case study research. Covered in the case studies are approximately 95 policy initiates. Among these specific policy initiatives were 16 economic initiatives, eight regulatory initiatives, 28 expenditure initiatives and 43 institutional initiatives. While it was not the intent of the research to conduct a comprehensive survey of specific initiatives, the distribution of the different types of policy initiatives in Annex 3 is consistent with general observations as discussed below.

Economic Policy Initiatives

Economic initiatives refer to measures that directly influence the price that a producer or consumer pays for a product, behaviour or activity. Economic instruments are also referred to as market-based instruments or financial incentives. Specific economic instruments include tradable permits, deposit refunds, performance bonds, taxes, user fees, subsidies, tax breaks, earmarked taxes and funds, and administered prices.

Experience outside of this project would suggest that the use of economic instruments is still in its infancy and therefore, there is much room for innovation. The fact that only 16 of 95 instruments featured in this study were economic instruments may support this experience. The use of such instruments as a strategy for generating revenue among the countries studied included Sweden, Costa Rica, Brazil, South Korea and Poland.

Sweden began experimenting with tax shifting in 1991 when it raised taxes on carbon and sulfur emissions and reduced income taxes. Manufacturing industries received exemptions and rebates from many of the environmental taxes, putting their tax rates at half of those paid by households. In 2001, the government increased taxes on diesel fuel, heating oil and electricity while lowering income taxes and social security contributions. Six per cent of all government revenue in Sweden has now been shifted. This has helped Sweden reduce greenhouse gas emissions more quickly than anticipated. A political agreement between the government and the opposition required a four per cent reduction below 1990 levels by 2012. Yet by 2000, emissions were already down 3.9 per cent from 1990—in large measure due to energy taxes.

Another innovative economic instrument related to climate change was observed in the U.K. The U.K. government launched the Climate Change Levy (CCL) Package in 2001 in support of the National Climate Change Program. The National Program represents the U.K.'s response to international and domestic climate change obligations, and includes a range of measures and policies directed at achieving broad reductions in greenhouse gas and carbon dioxide emissions. At the heart of the CCL package is a levy assessed on the use of electricity (0.46p/kWh), gas (0.15p/kWh) and coal (1.17p/kg). The levy is assessed on commercial and industrial energy use, with exemptions for certified combined heat and power schemes (co-generation), residential energy use, energy used for public transit, and energy from new renewables (e.g., solar and wind energy).

As is the case with many of the European green taxes that have been both politically successful and acceptable, a key feature of the U.K. climate change levy is the rebate. To reduce impacts on competition, revenues from the levy are returned to industry in the form of funding for energy efficiency and renewable energy research programs, a three per cent reduction in the rate of employee National Insurance Contributions (NICs), and enhanced capital allowances to be applied to investments in energy saving technology. However,

while the reinvestment scheme is revenue-neutral for industry as a whole, it is not revenue neutral for each facility. Facilities that are able to take advantage of tax breaks provided through the enhanced capital allowances program, and those that are able to make the transition to renewable energy sources or install more efficient technology, will benefit from the CCL scheme; facilities unable to make these adjustments will not recover all costs associated with the levy (Stratos Inc. 2003, p. 11).

A key feature of these ecological tax reforms is what is referred to as the "double dividend." Support for environmental taxes in the OECD is partly based on the belief that they can be used to reduce other distorting taxes such as income taxes—an approach pursued in both the U.K. and Germany. There is a growing body of literature on these and other environmental fiscal reform topics that can help inform government SD managers on the design and implementation of these types of initiatives.[6]

Another interesting and emerging economic instrument observed is greenhouse gas emissions trading, and the EU is actively developing this instrument. In order to minimize the economic costs of its Kyoto commitments on combating climate change, the European Union is setting up an EU-wide market for carbon dioxide emissions of companies. Under this trading scheme, around 10,000 EU companies will be able (from 1 January 2005 onwards) to buy and sell permits to emit carbon dioxide. According to the directive establishing an EU-wide greenhouse gas emissions trading scheme, Member States had until 31 March 2004 to be ready with their national emission allocation plans. These plans set the number of tradable allowances allocated to each of the industrial installations participating in the scheme.

Regulatory Policy Initiatives

Regulatory initiatives describe efforts to create change via legislative, liability, enforcement activity, and competition and deregulation policy instruments. Legislative instruments involve the acts and regulations that a government passes to create a legal mandate for change. Enforcement instruments are considered separately in that there could be a legislative requirement

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6   For example, a draft Inter-agency Paper is currently being developed through the Environmental Fiscal Reform (EFR) work program of the OECD Development Assistance Committee ENVIRONET Forum. In addition, an OECD policy reference document is being developed this year.

and no enforcement—the combination of course, leads to an ineffective legislative instrument. These instruments aim to induce socially-responsible behaviour by establishing legal liability for certain activities such as natural resource damage, environmental damage, property damage, damage to human health, non-compliance with environmental laws and regulations, and non-payment of due taxes, fees or charges (Panayotou 1998, p. 41). Competition and deregulation policy initiatives are directed at orienting markets such that "prices are established and investments are made in competitive and freely functioning competitive markets (NRCan 2002)."

Based on the number regulatory initiatives featured in Annex 3 it would appear that most of the countries studied either typically avoid or have not yet developed the harder regulatory-type initiatives for SD. One interesting example of a regulatory initiative observed was South Korea's Special Act on Seoul Metropolitan Air Quality. This special act aims at improving air quality in the Capital Region to average OECD-levels in 10 years. Key features include a total maximum loading system of pollutants, an emission trading system and enhancement of low emission vehicle supply. In this context, the Eco-Vehicle Choice Program has been designed to initiate green vehicle purchasing by dis-

closing emission discharge information on all domestic vehicles and models online. From 1 January 2005, the act requires producers to manufacture a set proportion of low- and zero-emission bus vehicles. Buses in Seoul shall be replaced with natural gas buses. The MoE provides subsidies for achieving this goal.

Expenditure Policy Initiatives

Governments can influence producer and consumer behaviour by channelling expenditures directly at the behaviour they want to encourage (NRCan 2002). This category of instruments is characterized by broad programs of expenditures targeted at a macro level to foster activities such as technological innovation. Specific instruments of direct expenditure include program/project operation, green procurement, and research and development. Many countries continue to subsidize environmentally-damaging behaviour as part of their social or economic policies.

In Mexico, an interesting bi-national expenditure program between the United States and Mexico was initiated to manage natural resources and the environment of the border region. The mission is to achieve a clean environment, protect public health and natural resources, and encourage sustainable development along the border. The program brings together federal,

Philippines Integrated Environmental Management for SD Sub-programs

Initiative	Outline
Integrated Philippine Economic, Environment and Natural Resources Accounting (PEENRA)	It is aimed at incorporating the depletion of natural resources and the deterioration of the general environment in the national income accounting process through adjustments and corrections made on measures like the gross national product (GNP) to reflect the real levels of economic welfare (Environmentally-adjusted Net Domestic Product).
Integration of Environmental and Socio-Economic Development Policies (SEI)	An action impact matrix which identifies priority areas of study on environment–economy integration has been developed. In this context a Monitoring, and Evaluation (MRE) System was prepared in collaboration with the PCSD.
Environmental Impact Assessment (EIA)	Incorporation of environmental concerns in the project evaluation process; preparation of an EIA Procedural Handbook; strengthening of the EIA system; development of environmental risk assessment software; and creation of a risk-liability system through the Environmental Guarantee Fund (EGF), a fund deposited by proponents of projects that pose significant risk for life, health, property and environment (required to submit an EIS).
Sustainable Development Models (SDM)	Formulation of SD indicators. Documentation of SD projects.
Environment and Natural Resource (ENR) Database	Develop and operationalize an Environment and Natural Resources Database.
Program Management Support System (PMSS)	Documentation and co-ordination of different SD projects.

Sources: UN (2002), UNDESA (2003), Lotilla (2002), UNDP (1998).

tribal, state and local entities from both countries to work collaboratively toward achieving set objectives. Five-year objectives are identified for nine bi-national workgroups: (1) water, (2) air, (3) hazardous and solid waste, (4) pollution prevention, (5) contingency planning and emergency response, (6) cooperative enforcement and compliance, (7) environmental information resources, (8) natural resources, and (9) environmental health. Annual Implementation Plans are developed that identify U.S. and Mexico federal funding levels for a given year and, based upon available funds, describe specific projects that will advance the long-term objectives of the Program (U.S. EPA 1999).

Institutional Policy Initiatives

Institutional initiatives affect the workings of the government itself in an effort to promote change. Typically included in this category are changes in decision-making processes as well as internal education efforts and internal policies and procedures (e.g., a strategy document). An innovative instrument in this regard was observed in the Philippines. The *Integrated Environmental Management for SD* (IEMSD), supported by the Philippine Council for Sustainable Development, is implemented to support efforts in the integration of the environment in decision-making, proper pricing of natural resources, and strengthening of people's participation and constituency-building for environmental policy advocacy. The IEMSD has six sub-programs (see table on previous page).

3.4   Monitoring, Learning and Adaptation

Monitoring progress toward SD strategies and sustainable development, and learning from, and adapting to

this information constitute the critical feedback stage that closes the cycle of strategic management for SD strategies. The OECD-DAC guidelines for sustainable development strategies recommend that monitoring and evaluation "be based on clear indicators and built into strategies to steer processes, track progress, distill and capture lessons, and signal when a change of direction is necessary." Additionally, the UN DESA guidelines call for "integrated mechanisms for assessment, follow up, evaluation and feedback."

The challenges, approaches, and innovations observed from the country case study research with regard to monitoring, learning and adaptation are summarized in Table 3-4. The challenges summarized below differentiate between process and outcome monitoring. Process monitoring assesses progress toward the implementation of policy initiatives. It helps to address the question of—have we done what we said we wanted to do? Outcome monitoring assesses progress toward the substantive outcomes that policy initiatives are designed to achieve (e.g., child mortality, urban air quality, greenhouse gas emissions, household income levels, etc.). Too often organizations use progress toward process as a proxy for progress toward outcomes. This is due to the long time involved for a policy initiative to have impact, but more often due to the complexities of establishing the causality between a policy initiative and a specific sustainable development outcome—complexities that arise from the combined influence of a mix of policy initiatives implemented by governments at all levels and the actions of the private sector and civil society.

Table 3-4. Monitoring challenges, approaches and innovations.

Challenges	Approaches and Tools	Examples and Innovations
Process monitoring	• Process (output)-type monitoring and reporting (9 countries) • Auditing agencies • Spending reviews • Minister's reports	• Canada, U.K. • Canada • U.K., Cameroon and Madagascar PRSP • U.K.
Monitoring outcomes	• National SD indicators and reporting (9 countries) • National accounts statistics • Auditing agencies • Auditing committees • Independent advisory bodies	• EU, Morocco • Sweden, South Korea • Canada • U.K. • U.K.
Learning and adaptation	• Independent agencies and committees • Task Force or strategy revision • Advisory councils • Progress reporting • Research networks • Public consultations	• Canada, U.K., Philippines • U.K., Philippines • Mexico • Sweden, Germany, EU, • U.K. • India, Cameroon

3.4.1   Process Monitoring

Tracking progress toward implementation of initiatives directed at achieving SD strategy objectives is a fundamental part of managing the national SD strategy process. Process (output) monitoring is an approach that was observed in the country case study research. Countries with clear mechanisms and responsibilities for process monitoring of SD-related strategies included Mexico, Canada, Cameroon, Denmark, India, Madagascar, South Korea, Switzerland and the U.K.

Innovation was observed in Canada and the U.K. where process monitoring was institutionalized. For example, Canada's Commissioner of the Environment and Sustainable Development (CESD), situated in the Office of the Auditor General, plays a significant role in advancing the sustainable development agenda in Canada. The CESD audits the government's overall performance on environment and SD as well as the commitments included in departmental strategies, reporting to Parliament on overall progress towards stated objectives. The findings from the Commissioner's report have often led to direct responses by departments and agencies, and the recommendations have been influential in determining the content and rigour of each round of SD strategies.

Spending reviews are another approach to address the process monitoring challenge. In the U.K., a 2004 Spending Review will be conducted which will present an opportunity to assess whether formal delivery targets reflect the breadth of WSSD commitments. Also in the U.K., information on Government performance is also provided in the Green Ministers' annual report. The report includes a searchable database that provides details of each department's performance under the Green Ministers work program. Performance is searchable by department and by subject, and includes an assessment of performance against government-wide targets and objectives.[7] Monitoring and reporting in the U.K. is also supported by a sustainable development Web site, hosted by the Department of Environment, Food and Rural Affairs' Sustainable Development Unit which includes annual reports on progress towards sustainable development, updates on performance targets, and links to the Green Ministers' annual report. Spending reviews are also conducted as part of the PRSP process as seen in the Cameroon and Madagascar case studies.

3.4.2   Monitoring Outcomes

While tracking progress toward the implementation of SD strategies is important, it is the tracking of progress toward SD on the ground that is the most important. Developing a set of indicators to do so is a complex process consisting of many components. First of all, the selection of outcome indicators reflects what is important and, therefore, ultimately must identify priority issues that should be monitored. As such, the development of indicators may best be integrated with a process for setting sustainable development objectives (e.g., in the leadership stage of strategic management). Once priority issues are identified, SMART indicators need to be developed, that is, indicators that are Specific, Measurable, Achievable, Relevant/Realistic and Time-bound. Once an indicator has been developed, the data must be collected, presented and analyzed to interpret trends.

From the case study research, it appears that about half of the countries studied have developed a national set of SD indicators and were tracking their trends. These countries included Costa Rica,[8] EU, Germany, Mexico, U.K., Sweden, Philippines, Switzerland and Morocco.

The U.K. case again appears to be unique in terms of annual reporting. At the heart of the U.K.'s national SD strategy are a set of 15 headline indicators, and an additional set of 147 national indicators and region-specific regional indicators. The headline indicators were identified through a public consultation process and have been refined over time (the original strategy included only 13 Headline Indicators). The U.K. Government (co-ordinated by the Department for Environment, Food and Rural Affairs) produces an annual report that outlines progress made towards the objectives and targets included in the national SD strategy and provides performance information related to each set of indicators. Progress is measured against baseline data, and overall trends are identified.

Morocco has been involved in the working framework of the Mediterranean Commission for SD, to set up an indicator system for SD specific to the national context. The National Committee for SD Indicators (CNIDD) was set up to create a program to test and validate the indicator system. They used the framework of the Blue Plan for the Mediterranean (non-governmental research organization supported by UNEP).

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7   The database can be found at http://www.sustainable-development.gov.uk/gm2001/part2/search.asp

8   This was a multi-stakeholder initiative that included government, but it was not a government-headed monitoring process.

Chapter 1: Population and Society
Demography and Population:
1. Growth population rate
2. Total fertility index

Quality of Life, Employment, Social Inequities, Poverty and Unemployment
3. Number of employed women for each population of 100 employed men
4. Population living under poverty line
5. Employment rate

Culture, Education and Sensitizing:
6. Illiteracy rate
7. Enrolment in school rate
8. Proportion of expenditure allocated to vocational training
9. Public expenditure on education
10. Public expenditure on conservation and valorization of historic and cultural patrimony

Health and Sanitation
11. Life expectancy at birth
12. Infant mortality for each 1,000 alive births
13. Access to drinking water
14. Motherly mortality for each 100,000 births
15. Mortality due to environmental diseases rate

Consumption and Production Patterns
16. Annual energy consumption per capita

Chapter 2: Land and Territory
Habitat and Urban Systems
17. Loss of arable lands due to urbanization
18. Unhealthy settlements rate
19. Urbanization rate
20. Area of green spaces per capita within towns of more than 100,000 hab.

Rural and Arid Areas, Mountains and Marginal Lands
21. Rate of integrated programs for rural zones

Forest
22. Total area of deforested land
23. Forested area and forestation rate
24. Rate of reforested areas in deforested lands

Coast and Coastalization
25. Population density in coastal provinces (hab/km)
26. Coastal erosion
27. Area of protected coastal zones

Sea
28. Maritime traffic of petrol
29. Quality of coastal sea waters

Chapter 3: Economic Activities and Sustainability
Economy in General
30. PIB structure per economic sector
31. PIB per capita
32. Direct Exterior Investment
33. Exterior debt/PIB

Agriculture
34. Fertilizer and pesticides used per hectare
35. Area covering irrigated lands
36. Area covering pastoral foraging units

Fishing
37. Value and volume of fishing products
38. Number and average growth of fishing vessels

Mines, Industry
39. Number of mines and quarries rehabilitated
40. Water polluted by industrial waste

Services, Business
41. Number and area of big shopping malls

Energy
42. Energy assessment per source
43. Proportion of renewable energy resources

Transports
44. Structure, volume and rate

Tourism
45. Number of hotel overnights per 100 hab.
46. Number of hotel beds per 100 hab.
47. Number of international tourists per 100 hab.

Chapter 4: Environment
Drinking Water and Sewage
48. Annual rate of resource mobilization on water
49. Water's general quality index
50. Rate of drainage systems for resource sanitation and treatment of sewage
51. Siltation of dams rate

Soil, Vegetation and Desertification
52. Land area affected by erosion, salinization and desertification
53. Land use evolution

Biodiversity, Ecosystems
54. Area of protected zones
55. Endangered species

Domestic, Industrial and Hazardous Waste
56. Production, collection and destination of solid waste

Air
57. GHG emissions
58. Sulphurous and nitrogenous emissions
59. Frequency of surpassing the standards for O_3, SO_4, NO_2, MPS and Pb-3.
60. Consumption of ozone depleting substances

Natural and Technologic Hazards
61. Flooded areas

Sustainable Development, Stakeholders and Policies
62. Number of associations that concentrate on environment and SD issues
63. Public expenditure dedicated environmental protection in PIB's %
64. Existence of national plans for the environment or/and strategies for SD
65. Number of Local Agenda 21s adopted by local authorities

Source: ONEM at http://www.minenv.gov/onem/rapport_idd/glossaire.pdf (project translation)

After a participatory process a battery of 65 indicators (shown in the table on the previous page) was chosen and made available through a publication (also via the Internet) to be updated on a regular basis.

It is worth noting that just because a country was not mentioned in this section as having a national set of SD indicators does not necessarily mean the country has not developed indicators related to SD. For example, Statistics Sweden has been publishing national environmental statistics since 1977. The most recent edition—a collaborative effort between Statistics Sweden and the Swedish Environmental Protection Agency, released in 2000—represents an evolution in environmental accounting, providing a systematic description of the relationship between the environment, employment, and the economy. The data are presented in the same manner as economic data, and function as a satellite system to Sweden's national accounts. Another example is South Korea's The Korean System of Integrated Environmental and Economic Accounting (KORSEEA). KORSEEA is a research project that adds Environmental Accounting Elements to the National Accounting System. It includes data on expenditures on environmental protection, on charges and subsidies as well as data on the supply of natural resources, on non-market uses of natural assets by industries and households and on asset accounts of non-produced "economic" and "environmental" assets (both in physical and monetary terms, including stocks, changes in stocks through depletion and degradation and other volume changes of land, minerals, forests, fish, air and water).

In the U.K., there exists a Parliamentary Environmental Audit Committee with the mandate to "consider to what extent the policies and programs of government departments and non-departmental public bodies contribute to environmental protection and sustainable development; to audit their performance against such targets as may be set for them by Her Majesty's Ministers; and to report thereon to the House."9 Each annual report provides an overview of government performance with respect to specific themes that have been identified as relevant for the current fiscal year. In 2003, these themes were: waste; greening government; fiscal issues; energy; education for sustainable development; and World Summit follow-up. Canada's Commissioner of the Environment and Sustainable Development provides a similar function in the Canadian government with respect to departmental SD strategies.

Another tool for tracking progress toward SD is an independent commission such as used in the U.K. The U.K.'s Sustainable Development Commission is responsible for identifying any unsustainable trends, and for providing constructive criticism regarding the Government's performance in delivering sustainable development.

3.4.3   Learning and Adaptation

How organizations learn from the information compiled through monitoring progress toward process and outcome can occur through a combination of both informal and formal approaches and tools, the appropriate balance of which is something all organizations struggle with. The development and use of indicators for both process and outcome monitoring as highlighted in the previous sections does not imply that actual organizational learning has occurred, and nor does it guarantee that any necessary improvements or adaptations will be made.

In most organizations, public or private, there is seldom a formal mechanism in which organizations set time aside on a regular basis, to sit back, extract the key lessons from monitoring information and plan the necessary actions to adapt to the new information. In most instances, organizational learning and adaptation occurs in an ad hoc manner. This was the situation observed in the countries studied in this project, where several approaches and tools help to serve this function, but in ways that were not explicit.

For example, the independent auditing approaches already presented for the U.K. and Canada provide a learning tool for the SD strategy process. The auditing process essentially looks for weaknesses and recommends appropriate measures to address the weaknesses. In the Canadian case, the departmental strategies must be reviewed, revised and re-tabled every three years, providing a regular opportunity for learning and adaptation.

Special commissions are another tool for learning and adaptation. For example, the U.K.'s Sustainable Development Commission, described previously, is responsible for identifying any unsustainable trends and making necessary recommendations to the government.

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9   <http://www.parliament.uk/parliamentary_committees/ environmental_audit_committee.cfm>

The U.K.'s *Sustainable Development Task Force* provides another example of a learning and adaptation approach/tool. The U.K.'s Task Force approach appears to go beyond just rewriting the strategy by formalizing a rewriting process that is based on learning that occurred through the WSSD process. The Task Force is chaired by the Secretary of State of Department for Environment, Food and Rural Affairs, and includes Ministers from England, Scotland, Wales and Northern Ireland, as well as key stakeholders. The Task Force recently finished reviewing the current strategy, and will put forward a new, revised strategy by 2005.

The Philippines used a two-phase approach to learn and adapt its national Agenda 21 (PA 21). Phase 1 consisted of an external and independent evaluation including a core group workshop, separate sectoral reviews by government, civil society and business sector, island consultations on *PA 21 localization*, and an expert's workshop to draft the *Enhanced PA 21* in 2004. Phase 2 was conducted by the Philippine Council for SD (PCSD) committees and the secretariat. The first results are presented in the report *From Rio to Manila: Ten years after An Assessment of Agenda 21 Implementation in the Philippines* issued by members of the Technical Secretariat of the PCSD, which was the Philippine contribution for the World Summit on Sustainable Development (WSSD). The report indicates that on the one hand, "the extent and quality of implementation of the PA 21 commitments appear to be generally high, while on the other, the impact of implementation has, so far, been low" (Virtucio 2002, p. 26). The report highlights some major accomplishments such as integration of SD in governance; localization of PA 21; multi-stakeholder participation; the Information Education and Communication Plan and advocacy; and disaster management. In brief, the implementation of PA 21 was marked by uneven progress at several fronts. This report also stresses that further clarification and operationalization of the SD framework is needed. The broad scope of concern under SD may have spread resources and efforts too thinly to be immediately effective (Virtucio 2002).

Research networks can also be a tool for learning in SD strategies. For example, to assist with implementation and achievement of sustainable development objectives, the U.K. Government also established a *Sustainable Development Research Network*. The Network is sponsored by Department for Environment, Food and Rural Affairs' *Sustainable Development Unit*, and is co-ordinated by the *Policy*

Studies Institute (in association with several academic research institutes). The Network has published a report on gaps and opportunities for policy research related to integrating sustainable development into wider public policy, and is identifying ways in which the Government can efficiently implement SD policies and programs.

> **IWRM Feature 7. Learning from IWRM:**
> **Feedback Loops in the IWRM Cycle**
> **(from Jønch-Clausen 2004, p. 8)**
>
> "A number of countries have brought the IWRM process into their water laws and governance systems including the demand to review the process at regular intervals. This enables them to deal with new or additional priority water resources issues, management needs and infrastructure requirements as they arise. No country ever 'completes' the cycle—it is an ongoing learning and development process in which countries find themselves at different stages."

In Mexico, pursuant to the Ecology Law, the Secretariat of Environment and Natural Resources must establish Advisory Councils for implementing and monitoring environmental policies that include the participation of academics, NGOs, business, and local and federal authorities. These Councils are advisory bodies responsible for advising, assessing and following through on environmental policy.

Strategy progress reports are also a tool for learning as can be seen in countries like Sweden and Germany. For example, in Sweden a progress report on the implementation of the 2002 strategy is being incorporated into the revised strategy, targeted for completion in the spring of 2004. The Ministry of Environment is responsible for co-ordinating this report, but it is each ministry that is responsible for monitoring the progress towards the implementation of its own relevant targets and providing that information to the Ministry of Environment as it collates the data (Knutsson 2004). The revised strategy will also be used to identify new issues to sustainable development in Sweden (Knutsson 2004). In Germany, a progress report on the national SD strategy is to be delivered by the Federal Government every two years. The report shall describe, for all thematic areas of the national SD strategy, the progress made and the need for action. At the same time, the report is intended to further develop the strategy and to highlight new areas of action for implementing the strategies objectives. The first report is scheduled for the fall of 2004.

As another example, the *SD Spring Review* in the EU gives a broad basis for a long-term learning process and offers the possibility to adapt changes. The communication on the new SD strategy adopted by the Commission indicated that the EC will submit a progress report on implementing the SD strategy at all future spring meetings (*SD Spring Review*) of the European Council. The strategy will be reviewed at the start of each Commission's term of office, and assessed every two years by a *Stakeholder Forum*. The *SD Spring Review* aims to analyse the progress made by the Union and by the Member States. It is based on the implementation reports of the Broad Economic Policy Guidelines and Employment Guidelines, and on the structural indicators proposed by the Commission and agreed on by the Council. At the *SD Spring Review*, EU Heads of State and Government assess the progress of the strategy and decide future priorities in order to realize the Lisbon targets.[10] However, the precondition for an effective political evaluation is development of quantified targets, measures and deadlines for their attainment. This has so far not been achieved, but priority areas have been identified.

The very process of public consultation in the preparation of a strategy can also serve as a learning and adaptation mechanism. Innovative examples of this were observed in India and Cameroon. In India and in the run-up to WSSD, a number of initiatives were taken such as a review of policies in relation to Agenda 21, multi-stakeholder consultations, a media campaign and Web sites to give information about India's preparations towards the Summit as well as a nationwide children's competition. Organized by the Centre of Environment Education and supported by the Minister of Environment and Forests, seven Regional Consultations and several smaller, thematically specialized meetings were organized. By and large, these consultations covered general sustainable development concerns and a few regional issues. These discussions were condensed into a draft document *Sustainable Development – Learning and Perspectives from India* (MoEF 2002b, UN CSD 2002).

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10 In 2001, the Sustainability Strategy was added to the Lisbon Strategy (for employment, economic reform and social cohesion, adopted in 2000 at the Stockholm summit in 2001 in order to ensure sustainability. Since then, the Lisbon Strategy, which consists not of a single document, but more of a set of sub-strategies, has functioned as the core strategy framework.)

IWRM Feature 8. Learning from IWRM: Regional Learning Networks for Integrated Water Resources Management

A number of regional learning networks have been established to foster the sharing of best practices related to integrated water resources management (IWRM). Three such networks include:

NARBO – Network of Asian River Basin Organizations
[http://www.narbo.jp/]

"NARBO's objectives will be to promote the exchange of information and experience among river basin organizations (RBO) and their associated water sector agencies in Asia and to strengthen their capacity and effectiveness in promoting IWRM and improving water governance." NARBO was jointly established by Asian Development Bank (ADB), ADB Institute, and the Japan Water Agency and was launched on 20 November 2003.

IWRN – Inter-American Water Resources Network
[http://www.iwrn.net/mainenglish.html]

"The IWRN is a network of networks whose purpose is to build and strengthen water resources partnerships among nations, organizations, and individuals; to promote education and the open exchange of information and technical expertise; and to enhance communication, cooperation, collaboration and financial commitment to integrated water and land resources management within the context of environmental and economic sustainability in the Americas.

The IWRN is composed if an Advisory Council of more than 130 institutions, organizations, and private sector representatives. In addition, the IWRN has a National Focal Point in each of the 34 participating member countries of the Organization of American States (OAS). These are governments appointed ministries or institutions responsible for water resources on a national level. In addition, each National Focal Point is supported by an individual who acts as the operational focal point by coordinating activities and meetings, disseminating IWRN information materials, and consulting with governmental and nongovernmental institutions, private businesses, and individuals involved in the use and management of water resources in their country. The Unit for Sustainable Development and Environment of the OAS serves as the Technical Secretariat of the IWRN."

IWCAM – Integrated Watershed and Coastal Area Management – Caribbean

[http://www.cep.unep.org/programmes/amep/ GEF-IWCAM/GEF-IWCAM.htm]

The objective of the IWCAM project is to strengthen the capacity of the 13 participating countries to implement an integrated approach to the management of watersheds and coastal areas. The IWCAM project was developed under the Project Development Facility of the Global Environment Facility (GEF). UNEP is the lead GEF Implementing Agency in collaboration with the United Nations Development Programme and UNEP-CAR/RCU is coexecuting this project with the Caribbean Environmental Health Institute, on behalf of the 13 small island developing states of the Wider Caribbean Region.

Cameroon's National Poverty Reduction Network (NPRN) proposed under the PRSP process is a more formalized example of the public consultation approach. Through the network, the Cameroon government intends to gain insight into the way grassroots segments of the population rate the effectiveness and efficiency of public spending on the social sectors and basic infrastructure, and to hear their suggestions for improving budget execution.

3.5 Co-ordination

Co-ordination is a cross-cutting aspect in the strategic management cycle for national SD strategies. There are many dimensions to co-ordination in a national SD strategy. Some of these are outlined in the UN DESA guidelines for national SD Strategies including:

- linking local, national, regional and global priorities and actions;

- linking the national, regional and global levels;

- linking different sectors;

- coherence between budgets and strategy priorities; and

- linking the short-term to the medium- and long-term.

The first two bullets above relate to issues of vertical co-ordination, while the second two bullets deal with horizontal co-ordination. The last bullet is related to inter-generational co-ordination and this issue was discussed previously in Section 3.1 in relation to aspects of leadership and the integration of inter-generational SD principles into the strategy process. In the sections below we discuss three horizontal and vertical co-ordination challenges identified in the 19 country case studies and describe some of the approaches and innovations that were observed.

3.5.1 Co-ordinating with the National Budgeting Process

The country research identified that formal linkages between national SD strategies for SD and national budgets typically do not exist. All budgeting processes

Table 3-5. Co-ordination challenges, approaches and innovations.

Challenges	Approaches and Tools	Examples and Innovations
With national budgeting processes	· Incentive structures · Spending review · Environmental taxes · Links to national planning process	· PRSPs and HIPC debt relief · U.K. · Sweden · Mexico, Philippines
With other strategy processes	· Comprehensive SD strategies that provide framework for other strategies · Inter-departmental co-ordinating committees · Institutional home for national SD council · Cross-sectoral workshops and action areas · Cross-cutting issues · Green Cabinets	· U.K. · Canada · Philippines · Morocco · Germany, Canada, Cameroon, Madagascar, South Korea · Germany, U.K.
With sub-national and local strategy processes	· Municipal SD strategies · Local Agenda 21 process (e.g., China, Denmark, Costa Rica and South Korea)	· Denmark · South Korea

have some mechanism whereby government departments prepare plans that articulate proposed expenditures. The challenge for nations is to integrate the principles of SD and the objectives of the national SD strategies formally into the budgeting process.

A number of interesting approaches and innovations however, were observed from the research. For example, the requirement for implementation of key priority areas in PRSPs to reach the HIPC debt relief completion points, results in attention from the national budgetary process (e.g., Cameroon and Madagascar). The trade-off that has been acknowledged, however, is that the PRSP feels less country-owned (GTZ 2000, p. 12). The irony is that national SD strategies, which are typically more country-owned, have less pressure on them to be implemented (GTZ 2000, p. 12).

The U.K. emerged as an innovator in their approach to incorporate sustainable development considerations into the spending review process. All government departments are now required to produce a sustainable development report that outlines the potential SD impacts related to public spending related to proposed policies, plans and programs. While departments appear to be struggling with this requirement, the Government has been developing tools and guidance to assist with the process (e.g., integrated policy appraisal procedures). Recognition of the link between spending decisions and sustainable development impacts demonstrates the country's strong commitment to improving on-the-ground performance, and in achieving real results.

The Canadian case study provided an interesting additional perspective in this regard. While each of 25 government departments are required to prepare a departmental SD strategy every three years, it is still the situation that annual departmental plans submitted to Parliament (the departmental Report on Plans and Priorities) remains a document distinct from departmental SD strategies. While some departments have recognized the inherent similarities in the two documents and have integrated the two, most departments have not.

Another approach for co-ordinating SD strategies with national budgeting is through tax shifting. For instance, in countries where environmental taxes represent a large portion of government revenues, such countries could be said to have integrated SD into the budgeting process. Of the countries studied, Sweden is an innovator in this regard, in that six per cent of all government revenue is now raised by environmental taxes.

Integrating SD principles into existing development planning processes is another approach for co-ordinating with the national budgeting process. This is Mexico's SD strategy approach. The 2001–2006 National Development Plan is translated into a set of programs which serve as long-term policy guides and are the basis for much of the public spending. While this approach does create more direct linkages with the national budgeting processes, it comes with the disadvantage that the SD strategy and its included objectives are not developed in as comprehensive a manner as occurs with separate SD strategies.

Additionally, the Philippines Agenda 21 has provided a conceptual framework for integrating SD concerns in the country's medium- and long-term development plans. Through Memorandum Order N° 33 NEDA was directed to integrate the Philippine Agenda 21 into the Medium-Term Philippine Development Plan 1993–1998 (MTPDP) which is the master plan for development in the Philippines. At the broadest level, the Philippine National Development Plan for the 21st Century (Plan 21), or Long-Term Philippine Development Plan 2000–2025 (LTPDP), uses Philippine Agenda 21 as its overall guiding framework. Consequently the later MTPDP 1999–2004 also integrates SD concerns.

3.5.2 Co-ordinating with Other Strategy Processes

Co-ordination between the SD strategy and other strategy processes was a challenge in all countries studied. This was the case no matter what type of strategy approach was used and no matter if the country was developed or developing.

The comprehensive, multi-dimensional SD strategy tends to exhibit more co-ordination than the sectoral and cross-sectoral strategy approaches due to their overarching nature. For example, the national SD strategy in Germany is linked to the strategy of fiscal consolidation, social renewal, and the promotion of renewables. But it is also the case that these strategies were developed independent of the SD strategy as they already existed. So, while in the German case there was co-ordination among the SD strategy and other strategies, the SD strategy did not provide an overarching framework for action, but rather, it was more of a summary of existing strategies. This case highlights a challenge that is common to many of the comprehensive, multi-dimensional SD strategies—that the SD strategy at this early point in time in their use, is more a post-rationalization of existing strategies, rather than a guiding framework that

stimulates new action. The U.K. national SD strategy appears to operate more on the other end of the spectrum relative to Germany in that the U.K. strategy outlines the underlying goals of sustainable development, and commits the government to establishing new decision-making processes, institutions, instruments, partnerships and communication processes.

For countries which pursued either cross-sectoral or sectoral SD strategies, the extent of co-ordination among strategies was minimal. For developing countries such as Cameroon and Madagascar, the Poverty Reduction Strategy Paper (PRSP) process contained minimal discussion of the environment or the national environmental management strategy process that was in place in both countries; this despite the many important linkages between the environment and human well-being.

In Canada, where sector-like SD strategies are prepared by 25 government departments, there was little co-ordination among the different strategies. This should not be surprising given the complexity in co-ordinating this many detailed departmental strategies. Canada has recognized the difficulty and has developed a number of co-ordinating mechanisms including a Deputy-Minister level Co-ordinating Committee on SD and the Interdepartmental Network on SD Strategies. However, it would appear that these co-ordinating mechanisms have not yet matched the level of complexity inherent in the inter-dependencies of economic, social and environmental sustainability.

The Philippines case highlights an innovative approach for co-ordinating among different strategy processes. The National Economic and Development Authority (NEDA) was designated the lead government agency for the Philippine Council for Sustainable Development (PCSD). The fact that PCSD Secretariat is located in the NEDA premises and that national planning in the Philippines has a high component of multi-sectoral integration, has facilitated the work of the PCSD to introduce the SD framework in national planning.

In Morocco, through a national integration workshop, key recommendations from each of the sectoral workshops were brought together to produce a cohesive, integrated Environmental Action Plan (PANE). In turn, this plan was then linked through cross-sectoral action areas with Morocco's three other national development plans: the Economic and Social Development Plan (1999–2003) (PDES); the Plan to Combat Desertification (PAN/LCD); and the Land

Management Plan (SNAT). The PANE is, therefore, a good example of the efforts made to overcome the sectoral approach in planning exercises.

IWRM Feature 9. Learning from IWRM: Lessons Learned in the Implementation of the EU Water Framework Directive – Organization of Working Groups and Cross-cutting Issues

The EU's experience in dealing with the complex interdependencies inherent in the implementation of the Water Framework Directive provides some valuable lessons for the national SD strategy process. The key lesson from the excerpt below is the importance of having formal mechanisms for addressing cross-cutting issues and linkages, but also having a mechanism that is adaptive enough to respond as needed in addition to regularly scheduled meetings.

"The high number of groups and experts [involved in implementation] put a considerable resource pressure on all involved parties. At the same time, the inter-linkages became more complex. Although the Strategic Co-ordination Group (SCG) was the main forum to discuss these inter-linkages, there was no direct mechanism to resolve such links and cross-cutting issues between working groups without awaiting the next meeting of the SCG. Such joint and flexible initiatives were relying mostly on the proactive action of the Working Group leaders which puts additional resource and time pressures on them.

Furthermore, the integration of the Common Implementation Strategy (CIS) working groups and Expert Advisory Fora (EAF) was not well-developed. On one hand, the EAF requires support from experts on specific technical issues (e.g., analysis and monitoring of priority substances). On the other hand, cross-implications between policy development and ongoing implementation were only discussed in the last stages of the Guidance development (e.g., role of priority substance in ecological status, monitoring for groundwater, reporting of pressures and impacts)."

The use of cross-cutting issues should also be mentioned as an approach for improving co-ordination among strategies. As previously mentioned in Section 3.1, Germany's national SD strategy established cross-cutting themes to guide its measures. Another example is poverty reduction strategy papers and national environmental strategies which help mitigate the silo-approach (e.g., Cameroon, Madagascar, South Korea). In Canada, the federal government established cross-cutting themes to help make departmental sectoral SD strategies more cohesive. Additionally, many countries

have articulated cross-cutting issues and action plans such as climate change action plans.

Finally, Green Cabinets, as described previously in Section 3.4, are also a tool for helping to co-ordinate with other national strategy processes. Germany and the U.K. are examples of this.

3.5.3 Co-ordinating with Other Levels of Government

The research conducted in this project focused mainly on strategic and co-ordinated action at the national level. But similar activities are underway at all levels of government ranging from the local/community, to state/provincial, to the international level. Co-ordination among these different levels will be critical for leveraging important changes. Such co-ordination is inherently more difficult in federal states where powers over SD policies are divided between levels of government. Below are some of the challenges, tools and innovations that could be extracted from the country case studies.

Some countries have co-ordinated national and local levels SD action through local Agenda 21 processes. Our analysis in this regard implies only that SD action occurred, and did not study the degree to which specific SD objectives and actions were co-ordinated at the two levels. Among these countries are Denmark, South Korea, China and Costa Rica. For example, in Denmark there is the plan that most municipalities in Denmark will develop a local strategy and a local set of indicators within one year—and 70 per cent of municipalities are succeeding. These strategies promoted the spreading of the idea of sustainable development in the general public.

In South Korea, 213 out of 249 regional government units have adopted a Local Agenda 21. One important reason for this was the reform of regional government in 1995 that gave the local governments greater regulatory power, for example, in the area of air quality standards. South Korea's National Action Plan of Agenda 21 fostered local Agenda 21s through financial and capacity support. The government also helped to establish the *Korean Council for Local Agenda 21* in June 2000 to better co-ordinate the implementation process.

Many of the countries studied also made links between national SD and international SD priorities. National objectives dealing with climate change mitigation and adaptation are an example of this. However, the Swedish case study introduced an innovative way of linking national and international priorities that was broader in scope. On May 23, 2003, the Swedish government was the first government to pass a development-related bill in direct response to the Johannesburg Plan of Implementation. Tabled in Parliament, the bill *Our Common Responsibility*—Sweden's policy for global development—"proposes new goals for all aspects of Government operations with the aim of contributing to fair and sustainable global development. Trade, agriculture, security, migration, environmental and economic policies are to promote global development. A poverty and human rights perspective shall permeate the entire policy. With this bill, the Government has reformulated its policy in order to contribute more forcefully to the fulfillment of the UN objectives. The overriding goal is to abolish world poverty. An intermediate goal is to halve world poverty by the year 2015 (Ministry for Foreign Affairs 2003)."

International commitments often drive domestic action. Trade treaties (e.g., WTO) and multilateral environmental agreements (e.g., Montreal Protocol, Basel Convention), for example, often impose obligations on member states that lead to substantial changes in domestic policy.

IWRM Feature 10. Learning from IWRM: Complex Jurisdictional Environments – IWRM in Canada

Federated countries have complex jurisdictional environments. For example, in Canada, responsibility for water is shared with 13 provincial and territorial governments. At the national level alone, the broad array of water issues and activities engages the mandates of at least 19 federal departments. Canada will meet its IWRM commitments through the sum of work achieved and underway across Canada—for example:

Ecosystem Initiatives: Five "Major Ecosystem Initiatives" have been established under the *Canada Water Act*: the Atlantic Coastal Action Program; the Georgia Basin Ecosystem Initiative (British Columbia); the Great Lakes 2000 Program; the Northern Ecosystem Initiative and the Northern Rivers Ecosystem Initiative; and the St. Lawrence Vision 2000 Program. The initiatives share common operating principles that stress ecosystem and precautionary approaches to pollution prevention; citizen and community involvement in the design and implementation of initiatives; long-term stewardship through partnerships and governments working together; and sound science combined with local and traditional knowledge as the basis for identifying and resolving issues.

Fraser Basin Management Board/Fraser Basin Council: In 1997, the Fraser Basin Management Board, which was established in 1991, was restructured into the Fraser Basin Council, a not-for-profit organization. This Council was launched to promote and monitor the implementation of the Fraser Basin Charter for Sustainability. The Council has an expanded membership consisting of 36 Directors with representation from various government, non-government and private interests throughout the Basin, including local and aboriginal administrations and members of the public from many sectors.

First Nations Water Management Strategy (FNWMS): Through the First Nations Water Management Strategy, Environment Canada (EC) works with Indian and Northern Affairs Canada (INAC), Health Canada, and First Nations communities, to ensure that those communities have access to clean, safe, and secure drinking water and healthy ecosystems. The Strategy will be implemented over the 2003–2008 period.

Federal/Provincial/Territorial Agriculture Policy Framework: Agriculture and Agri-Food Canada (AAFC) has developed an Agricultural Policy Framework that sets environmental performance targets in a series of Federal-Provincial implementation agreements. The APF provides for setting water-related performance measurement indicators and targets, and allocates funding for "environmental scans" to be carried out on all Canadian farms. Significant effort is going into the development of Beneficial Management Practices (BMPs).

Provincial Strategies/Policies: Most provinces in Canada have developed a water strategy or policy to guide their water management. For example, the provinces of Alberta, Saskatchewan, Manitoba, Ontario, and Quebec all include specific governance mechanisms in their policies to guide the implementation of watershed-based integrated water resource management. They typically included a nested set of watershed-based boards with regional and local sub-boards.

National Program of Action for the Protection of the Marine Environment from Land-Based Activities: Canada has responded to the United Nation's Program of Action for the Protection of the Marine Environment from Land-Based Activities (Global Program of Action). This discussion then led to the preparation of a national strategy document, *Canada's National Program of Action for the Protection of the Marine Environment from Land-based Activities*.

Source: Water Policy and Co-ordination Directorate, Environment Canada.

IWRM Feature 11. Learning from IWRM: The Canadian Council of Ministers of the Environment and IWRM

The Canadian Council of Ministers of the Environment (CCME) is a formal mechanism to facilitate collaboration on regional, national, Canada-US, and international environmental issues. The CCME paper "From Source to Tap – The Multi-barrier Approach to Safe Drinking Water" calls for a coordinated approach among stakeholders to develop short-and long-term source water protection plans on a watershed management basis that will prevent, minimize, or control potential sources of pollution. Some of the components of source water protection include public awareness, monitoring, partnerships and guidelines. This paper, which incorporates many IWRM principles, will provide consistent guidance to all efforts underway in Canada to protect drinking water from its source to the tap.

For water efficiency, through the CCME, a new water conservation and economic instruments task group will pursue work to enhance water conservation and use efficiency across Canada.

Source: Water Policy and Co-ordination Directorate, Environment Canada.

3.6   Participation

Like co-ordination, participation is a cross-cutting aspect in the strategic management of the national SD strategy process. It is perhaps one of the fundamental tenets of sustainable development and is reflected in the UN DESA and OECD-DAC guidelines for national SD strategies as follows:

- Country-led and nationally-owned (OECD-DAC);

- Country ownership and commitment (UN DESA);

- Effective participation (OECD-DAC); and

- Broad participation and effective partnerships (UN DESA) including institutionalized channels for communication and trust and mutual respect.

The extent of participation in a strategy process defines the ownership of the strategy. A truly national strategy will have in place a participation approach that obtains the collective feedback of all stakeholders in the country. Participation that falls shy of this mark would reflect more of a national government strategy for SD.

The dividing line between the two is not always clear, making it a difficult aspect to analyze. Significant progress has been made in participation approaches since the 1992 Earth Summit, and in many developed and developing countries, public participation in the creation of sectoral strategies is now part of regular business. But based on the country case studies reviewed, challenges still remain for effective participation and we summarized some of these challenges below along with the approaches and tools used.

3.6.1 Institutionalizing Participation

A wide range of approaches were pursued in the 19 countries studied for institutionalizing participation. These approaches can be broadly categorized as national councils for SD, cross-sectoral councils, and independent advisory bodies. Judging from the range of approaches and depths of participation sought after, selecting a particular approach for participation never has, nor likely ever will be, a simple matter.

National Councils for SD

Five of the countries studied have created a permanent multi-stakeholder council for SD to facilitate societal dialogue: the Philippines, Mexico, South Korea, Brazil and Germany.

For example, the Philippine Council for SD (PCSD) consists of four committees corresponding to the four major sections of the Philippine Agenda 21 and Agenda 21 tabled at Rio in 1992: Committee on Social and Economic Dimensions; Committee on the Conservation and Management of Resources for Development; Committee on Strengthening the Role of Major groups; and Committee on Means of Implementation (NCSD 2001a). Two of these committees have subcommittees, membership of which comprises both government and non-government representatives. These are: Biodiversity, Atmosphere, Land Resources, Water Resources, Financing Arrangements, Science and Technology, Information and Education, and on Legal and Institutional Arrangements. Agencies and groups not represented at the council level may become members of its committees and subcommittees. The PCSD has been supporting local initiatives on the creation of local councils for SD through technical assistance and trainings. To date, 16 local units have already been established, 11 of which are at the regional level, four at the provincial level and one at the municipal level. All matters which can not be settled or acted upon at the PCSD committee level are brought to the Council level discussions, such as those needing legislative and executive action.

Additionally, the German Council for Sustainable Development (RNE) has been promoted by the Federal Chancellor. Its 17 members are prominent persons from various sectors of society representing specific ecological, economic, and social interests. The RNE is staffed with an office in Berlin. Its primary function is to advise the government on the formulation and implementation of the national SD strategy. This regards especially the elaboration and evaluation of long-term objectives and indicators and the proposition of specific projects to realize the objectives of the strategy. The Council shall also assume a central role in public debates on SD in order to raise public awareness and to foster a social dialogue on SD. It has organized several conferences and has also started a competition named "Focus on Tomorrow," which aims at improving public awareness among young people. Last but not least, it has commissioned studies to analyse the sustainability of different industrial branches such as the telecommunication sector. Above all, therefore, it has functioned as a provider of arenas and impulses for discussions.

Cross-sectoral Councils or Networks

Countries which have pursued cross-sectoral SD strategy approaches have in place or have proposed perma-

Table 3-6. *Participation challenges, approaches and innovations.*

Challenges	Approaches and Tools	Examples and Innovations
Institutionalizing participation	• National councils for SD • Cross-sectoral councils • Independent advisory bodies • Place-based councils • Ad hoc public consultation	• Philippines, Germany • Cameroon • U.K. • Costa Rica • Canada, Denmark, Morocco, Poland, Sweden, Switzerland
Building trust	• Use of media to obtain members • Negotiation and conflict resolution as an explicit and necessary part of the participation process	• Mexico, Brazil • Brazil

nent participatory bodies. These countries include Cameroon for the PRSP process and Madagascar and South Korea for national environmental strategy processes.

Cameroon's proposed National Poverty Reduction Network is an innovative example due to its wide scope of responsibility. The NPRN will act above all as a forum for sharing experiences and exchanging data among groups and regarding participatory approaches, as well as a framework for societal supervision of all the activities undertaken to implement the poverty reduction strategy. The NPRN will be tested in pilot form before extending to all of Cameroon. With support from the UNDP, the GTZ, and the World Bank, the Cameroon government ran a seminar to identify the structure, management, steering, funding and relations with the development stakeholder community. The seminar was attended by key figures in civil society, representatives of NGOs and of different religious confessions, university professors, trade union representatives, mayors' associations and government officials. The NPRN will be open to all development players and facilitate a partnership between civil society and the government.

Independent Advisory Bodies

The U.K., Canada and the EU each had independent advisory bodies designed to provide expert advice to the government on SD and environment-related issues—the U.K. and EU examples being more directly linked to the SD strategies.

In the U.K. for example, The Sustainable Development Commission was established in 2000, and replaces both the U.K. Round Table on Sustainable Development and the British Government Panel on Sustainable Development. The Sustainable Development Commission is an independent advisory body, and includes 22 members from business, NGOs, local and regional government and academia. The Commission's role is to "advocate sustainable development across all sectors in the U.K., review progress towards it, and build consensus on the actions needed if further progress is to be achieved" (U.K. Government 2004). More specifically, the Commission's objectives are to:

- review how far sustainable development is being achieved in the U.K. in all relevant fields, and identify any relevant processes or policies which may be undermining this;

- identify important unsustainable trends which will not be reversed on the basis of current or planned action, and recommend action to reverse the trends;

- deepen understanding of the concept of sustainable development, increase awareness of the issues it raises, and build agreement on them; and

- encourage and stimulate good practice.

Place-based Participation

Costa Rica has a national sustainable development council (CONEDES) which was established in 1998. This body established itself as an instrument to promote dialogue and consent between diverse sectors in the field of environmental management and sustainable development (Earth Council 2001). However, it has been acknowledged that this council has not been able to create collective dialogues, discussion or decisions (Earth Council 2001). As a means "to create an operational National Council on Sustainable Development with the responsibility of developing a national Agenda 21 (Earth Council 2001)," a Local Agenda 21 demonstration project was initiated within Costa Rica's Osa Conservation Area (ACOSA).

The local Agenda 21 process in Costa Rica established a local consultative mechanism through Agenda 21 Tables. The Tables provide a collective level of permanent work on themes and problems particular to each sector. As illustrated in Figure 3-2, these Tables for the local development participative process are linked through a Civil Society Office to a higher level inter-institutional commission at the national level.

Ad Hoc Public Participation Processes

Many countries did not have permanent, institutionalized participatory bodies for their national SD strategy process. Countries such as Canada, Denmark, Morocco, Poland, Sweden and Switzerland have used a more ad hoc approach. For example, for Canada's 25 departmental SD strategies prepared every three years, each department consults its stakeholders in the development of the strategies and documents the input that was received and how it was taken into account in the SD strategy. In Sweden, a series of national seminars and regional consultative conferences were used in the development of their SD strategy.

3.6.2   Building Trust

Building trust among all stakeholders is fundamental to participation processes. Where trust among stakeholders with competing interests exist, innovative solutions

Figure 3-3. Stakeholder group interaction for the Local Agenda 21 process (from Earth Council 2001).
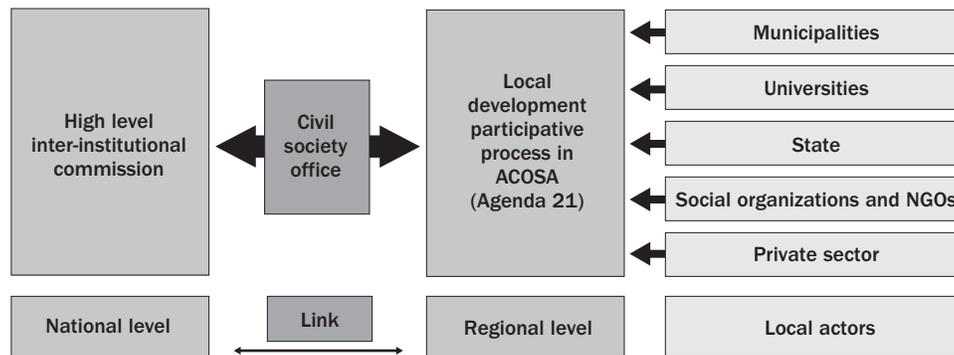
to problems can be identified. There is much to learn from the experience of permanent multi-stakeholder councils that have been operating for many years. For example, the Philippine Council for SD started out in a general atmosphere of suspicion and even mistrust, fostered by years of authoritarian rule, between the government and the civil society members (Isberto 1998, NCSD 2001a). One early conflict was initiated among NGOs over representation in the PCSD. This posed difficulties for the government secretariat, who had to bear the complaints from NGO groups who felt excluded from the process. Since then, a formal process for selection of PCSD representatives has been developed in the civil society community. Although dissatisfaction with the process continues to be expressed, the process has helped in minimizing conflicts and distraction (NCSD 2001a).

Mexico has experience with such a formal process of selecting representatives through its National Consultative Council for Sustainable Development and its membership process. The Council was originally created in 1995 and members were sought through a summons published in newspapers, as well as posters and promotional pamphlets distributed among various public and private organizations. In September 1998, a new summons was published in order to re-elect 50 per cent of the representatives in the social, business, academic and non-governmental sectors of the Consultative Councils for Sustainable Development, as stipulated in Councils' regulations.

Considering negotiation and conflict management as an integral part of the development of the national SD strategy is another important approach for building trust. The Brazil case study demonstrated the importance of conflict management. Conflict management was addressed in a forthright manner throughout the development of the Brazilian Agenda 21. The Brazilian Agenda 21 recommended that short- and long-term negotiations be conducted, so that there can be a balance between the Agenda's objectives and the environmental, economic and social development strategies. These kinds of negotiations were a part of the consultation and development process, with the hope of securing more effective implementation. But the skills involved in this process must be present in all stakeholder groups, otherwise the process can readily identify power differences and breed mistrust. The Costa Rica case studied illustrated the importance that Local Agenda 21 efforts be accompanied by the development of community building and negotiation skills at the local level. Without such capacity, there is the potential for the process to be unnecessarily divisive (Quesada 2004).

IWRM Feature 12. Learning from IWRM: The Philippines Agno River Basin Development Commission

The Agno River Basin Catchment area covers over 8,000 square kilometres. It is the fifth largest river basin in the Philippines with a population of more than four million. Three large hydro-electric dams are located in this catchment.

The Agno River Basin Development Commission (ARBDC) is mandated to oversee and coordinate all developmental undertakings in the Basin ensuring resources planning and management for sustainable development. It is entrusted with the primary responsibility of developing a comprehensive plan for an integrated development of the Basin.

The ARBDC, as the lead agency, co-ordinates all developmental and other related efforts in the Basin. Cluster teams are formed as forums for politico-administrative co-ordination. Problem-focused sub-basin teams are also organized to address major and common problems among clustered areas.

Government and civil society networking occurs in two levels of participation:

- Political level – institutionalization of participative policy-making process.

- Technical level – development of participative implementation, monitoring and evaluation process.
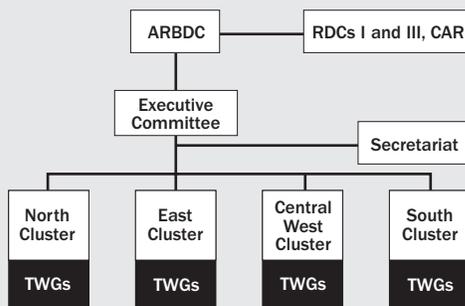
Source: Usec. Benjamin D. de Leon, Executive Director, Agno River Basin Development Commission. Presented at the First General Meeting of the Network of Asian River Basin Organizations, Indonesia, 26 February 2004.

IWRM Feature 13. Learning from IWRM: Learning about Participation from IWRM Efforts in Mexico

"Today, social participation has changed the nature of models. It is no longer a question of optimizing resource management (water and financing) according to public interest or electoral objectives, but of tackling the open and uncertain result of interactions between stakeholders. Modeling accompanies negotiation of which it becomes the central process. In addition, actors want their solutions, and their perception of the problem, to be tested.

Modeling must take into account a wide range of options, including territorially-based ones, and they have to be robust and flexible. Modeling also acquires its own legitimacy, firstly through experts appointed by opposing parties, which leads to transparent, open programming. Whereas former closed models prevented any recovery when necessary, current models become permanent tools for management and the support for future negotiations."

*Dr. Javier Aparicio
Co-ordinador de Tecnología Hidrológica
Instituto Mexicano de Tecnología del Agua*

4. Synthesis of Strategic and Co-ordinated Action

Experience has shown that a pathway to sustainable development cannot be charted in advance. Rather, the pathway must be navigated through processes of learning and adaptation.[11]

This research adopted as its foundation the notion that a national SD strategy is a process. Dalal-Clayton and Bass (2002) described the national SD strategy as a transition from "misconceptions of ideal and static master plans and one-off initiatives," to "sets of co-ordinated mechanisms and continuing processes of monitoring, learning and improvement." Steurer and Martinuzzi (2004) recently described the national SD strategy as a new pattern of governance and policy-making which they refer to as Strategic Public Management (SPM) and representing a transition from "grand planning schemes to adaptive strategy processes, from authorities to competencies, from pure hierarchies to a combination of hierarchies and networks, from control to monitoring, evaluation and feedback, and from knowing to learning." Using a broad brush we adopted a four-part management model to help study and analyze the strategy process in 19 developed and developing countries in order to identify and describe the key challenges encountered and the innovative approaches and tools that were used to address them.

In this section we synthesize what has been learned from the presentations on challenges, approaches and innovations in Section 3. First, from a big-picture perspective, we discuss what we have learned about the strengths and weaknesses of current strategic and co-ordinated action for SD. Second, we take a closer look at learning acquired in each of the four components of the strategic management model—leadership, planning, implementation, and monitoring and review, along with the two cross-cutting components of co-ordination and participation.

4.1 The Big Picture – Key Strengths and Weaknesses in Current Strategic and Co-ordinated Action for Sustainable Development

It was clear from this research that there is no single recipe for pursuing strategic and co-ordinated action toward sustainable development at the national level.

There is diversity in the approaches and tools available to governments. To be effective, approaches and tools need to be rooted in local political culture and reflect principles of sound strategic management. Based on the research, the U.K. stood out as a consistent innovator in many of the aspects of the strategic management cycle. However, it is too early see the effects that these process innovations are having on development in the U.K.

Research for the 19 countries illustrated that many innovative approaches and tools have been developed and applied over the past decade, both pre- and post-WSSD. But nations are only at the early stages of learning about the strategic management of national SD efforts. From our analysis of 19 countries we conclude that no country is acting truly strategically in their national SD efforts. The key weaknesses include:

- *The feedback mechanism – including monitoring, learning and adaptation.* While most nations have statistical offices that monitor various aspects of our economy, society and environment, only a few countries have developed an integrated set of indicators to allow analysis of the inherent trade-offs and inter-linkages between the economic, social and environmental dimensions of sustainable development. Even more elusive to detect from the research were formal and informal approaches and tools to learn from this type of integrated monitoring and make critical and necessary adaptations. We manage what we measure. Until we systematically monitor integrated sets of sustainability indicators, and employ a mix of formal and informal approaches and tools to learn and adapt accordingly, nations will not be acting strategically.

- *Co-ordination of strategy objectives and initiatives with the national budgeting process.* SD challenges us to re-think our existing policy initiatives as well as to develop new ones to address key issues. This also includes re-thinking our expenditure and revenue generation processes. Yet the overarching vision and specific objectives that have been developed through the leadership process of national SD strategy development do not have formal influence on national budget expenditures or revenue generating processes. The direction of most national SD strategies simply remains at

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11 National Academy of Science (1999).

the periphery. Until finance ministries or departments play a central role in the SD strategy process, the process of strategic management to ensure the sustainable development of nations on the one hand, and fiscal priority setting and national expenditure and revenue generation on the other, will not be fully integrated.

- *Co-ordination with sub-national and local sustainable development sustainable development action.* The research revealed that few countries were attempting to catalyze and co-ordinate with SD efforts at sub-national governance levels. Promoting SD effectively when governments with different geographical jurisdictions may be pursuing different agendas is inherently complex. National action toward SD, to be considered strategic and effective, must catalyze SD action and manage the interdependency between levels of government.

- *Implementing a mix of policy initiatives, and in particular, environmental fiscal reform initiatives which are typically underleveraged.* The complex and diverse nature of the interactions among people and among people and their environment demands that policy responses to key sustainable development issues be varied. Governments at all levels have at their disposal a mix of policy initiatives including regulatory, program or project expenditures, institutional, and economic initiatives. Our research indicates that while a mix of policy initiatives has been pursued in some countries, in general, economic instruments appear to be under-utilized. This is problematic given that all of the countries studied rely to an increasing extent on the market to allocate resources, and the market consists of the decentralized activity of millions consumers, investors, lenders, producers, etc., each with the potential to impact on the environmental and social systems that support our well-being. Until nations leverage the instruments of environmental fiscal reform (e.g., ecological taxes, emissions trading, user fees, etc.) efforts toward sustainable development will be playing at the margin.

It is clear that we need to take a step back and think about these systemic weaknesses. This research identified some innovators for each of these areas whose experiences can help provide guidance. For example,

with regard to the feedback mechanism, among the 19 countries studied the U.K. appeared as a consistent innovator through such approaches and tools as national sustainable development indicators and reporting, sustainable development audit committees and spending reviews, a Task Force for national strategy revision, and sustainable development research networks.

With regard to co-ordinating SD strategies with national budgeting processes, among the countries studied an interesting trend emerged in Mexico where the current strategy approach is to integrate sustainable development principles directly into its existing national development planning process, rather than creating a separate strategy process parallel to the national expenditure and revenue generating process. While this strategy approach creates close links to the national budgeting process, the sustainable development issues and objectives that were integrated into the national development plan were less detailed compared to the comprehensive strategies as articulated in other National Agenda 21 or National Sustainable Development Strategy documents. The Philippines can also be looked at as an innovator in terms of its ability to narrow the distance between the sustainable development strategy and the national budgeting process by establishing the National Economic Development Authority (NEDA) as the lead agency for the Philippine Council for Sustainable Development.

Several countries demonstrated co-ordination with sub-national sustainable development strategy processes including Denmark, South Korea, China and Costa Rica. For example, in South Korea, 213 out of 249 regional government units have adopted a Local Agenda 21. South Korea's National Action Plan of Agenda 21 fostered Local Agenda 21s through financial and capacity support, and the government established the *Korean Council for Local Agenda 21* to better co-ordinate the implementation process.

Finally, with regard to implementing a mix of policy initiatives, including more use of economic instruments, the innovation in this arena among the countries studied included Sweden's tax shifting, the U.K. and EU greenhouse gas emissions trading, and Costa Rica's payment for ecological services. For example, Sweden's experiment with environmental tax shifting began in 1991, when it raised taxes on carbon and sulfur emissions and reduced income taxes. In 2001, the government increased taxes on diesel fuel, heating oil and electricity while lowering income taxes and social security contributions. Six per cent of all government

revenue in Sweden has now been shifted, helping Sweden reduce greenhouse gas emissions more quickly than anticipated.

4.2 The Details – Key Learning Related to Specific Aspects of Strategic and Co-ordinated Action

A number of other challenges, in addition to the key ones articulated above, were highlighted in this research project and studied in Section 3 and summarized in Table ES-1. The key learning acquired in studying these challenges in relation to each aspect of strategic and co-ordinated action are discussed below.

4.2.1 Key Learning Related to Leadership

With regard to leadership, four challenges were particularly evident from the country research. These were studied in detail in Section 3 and included:

- Consideration of a mix of strategy approaches (comprehensive and multi-dimensional; cross-sectoral, sectoral and integration into existing planning processes);

- Development of objectives that are measurable and time-based;

- Need for sustained leadership that takes into account an inter-generational time-scale in strategy development; and

- Understanding the linkages between economic, social and environmental systems.

Four main types of national SD strategy approaches were observed: comprehensive and multi-dimensional (e.g., Philippine National Agenda 21); cross-sectoral (e.g., Cameroon Poverty Reduction Strategy Paper); sectoral (e.g., Canada Departmental SD Strategies); and integration of SD into existing planning processes (e.g., Mexico National Development Plan). One observation is that these are not competing strategy approaches, such that a country should assess and pick one approach to follow. Rather, they are all part of a larger whole. Clearly, a nation needs a comprehensive and multi-dimensional navigation and implementation process. SD must penetrate into line departments. Clearly, there should be certain cross-sectoral foci, such as poverty reduction strategy papers, and national environmental management plans. And, clearly SD should be integrated into a nation's primary development planning and budgeting mechanism.

National governments appear to be in the midst of a long learning cycle whereby all are trying to develop a pragmatic system for the strategic management of national progress and development, while at the same time coming to grips with the principles that must guide this progress and development. Although none of the countries studied have developed the whole mix of SD strategy approaches, it is clear that organizationally, all countries are engaged in ongoing learning toward a mix of SD strategy approaches.

In addressing the challenge of commitment and focus toward SD, some of the countries have systematically developed quantifiable and measurable targets for SD objectives. This is a big advance in strategic management for SD over the last decade. Leaders in this regard among the countries studied include Sweden and the U.K. A rule of thumb from management sciences is for objectives to be SMART – Specific, Measurable, Achievable, Relevant/Realistic, Time-based.[12] Related to the time-based attribute of objectives was the challenge for nations to integrate the inter-generational principle of SD into the strategy process. One approach that several countries used in this regard was to set objectives that spanned upwards of 25–30 years into the future.

One of the more intractable challenges observed was in understanding the interdependency of the economic, social and environmental dimensions of SD. In this component of leadership, we could identify few approaches or tools from the country research that addressed this challenge. In most cases, the SD strategy was a compilation of economic, social and environmental issues, objectives and initiatives. The fundamental notion of how issues, objectives, and initiatives influence each other both positively and negatively was not a fundamental part of strategy content. The German national SD strategy, which a series of cross-cutting objectives to guide proposed measures, would appear to help identify linkages among the dimensions of SD. Additionally, the *Integrated Policy Assessment* tool used in the U.K. and strategic sustainability assessment in Switzerland are two innovative tools to help address this challenge in the planning stage.

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12 For example, see http://www.wgrange.com/news/smart.html and http://www.learnmarketing.net/smart.htm

IWRM Feature 14. Learning from IWRM: The Water Basin as the Basic Planning and Management Unit

"Water follows its own boundaries—the river or lake basin, or the groundwater aquifer—and analyses and discussions of water allocation between user and ecosystem needs make sense only when addressed at the basin level. Hence, a lot of the 'integration' in IWRM takes place at the basin scale, whether at the local catchment or aquifer, or at the multi-state or multicountry river basin. Many countries have realized this and organized their water management at the basin level years ago (the Spanish river basin management structure recently celebrated its 75th anniversary; and the first Mekong River Basin structures were established in the 1950s). Several countries are now setting up various river and lake basin management structures.

With the EU Water Framework Directive in Europe basin level management has become law for an entire region. However, it is important to stress that 'integrated river basin management' and 'integrated water resources management' are different concepts. Many policy decisions affecting water management—within or between sectors (such as food, health, energy, etc.)—can be taken only at the national level, not at the basin level, and within the 'water sector' policy decisions on, e.g., cost recovery are necessarily taken at the national level. So the two are complementary, strongly interrelated, and both aim at wise water governance."

[from Jønch-Clausen (2004), p. 7]

4.2.2   Key Learning Related to Planning

For the most part, planning is an aspect of strategic management that countries have significant experience with and are quite good at. However, for the national SD strategy process key challenges remain in a number of areas as evidenced by the country research, including:

- Establishing a clear legal mandate for the process;

- Thinking strategically about the institutional arrangement for the strategy process; and

- Assessing specific policy initiatives using an economic, social, and environmental lens.

The country research revealed that only three of 19 countries had a clear legal mandate for the SD strategy process. These were countries that used either a sectoral (Canada) or a cross-sectoral strategy approach (Madagascar, South Korea). An innovation was observed in Canada's amendment to the *Auditor General Act* in 1995 requiring federal departments to table Sustainable Development Strategies in Parliament every three years.

In terms of establishing an institutional basis for the strategy process, a good example was the innovative approaches used in the Philippines. The vice-chairman of the National Economic and Development Authority (NEDA)—a body chaired by the president and the highest social and economic development planning and policy co-ordinating body in the country—chairs the Philippine Council for SD. This was a key strategic accomplishment in an SD strategy process that was given its legal mandate in the 1980s through the Revised Environment Code and initiated by the Department of Environment and Natural Resources.

The use of strategic environmental assessment to assess specific policy initiatives in their design stage in increasing (eight of 19 countries studied). The trends toward a broader-based policy assessment are also encouraging. Examples include the U.K.'s Integrated Policy Appraisal and Switzerland's Sustainability Assessment.

4.2.3   Key Learning Related to Implementation

Implementation is the aspect that in most conversations would be cited as the greatest challenge. Among the challenges studied in detail in this report were:

- Establishing responsibility for implementation of strategy objectives;

- Using a mix of financing arrangements; and

- Using a mix of policy initiatives, particularly the underutilized economic initiatives to reflect environmental and social costs and benefits.

In all countries studied, the primary responsibility for the implementation of specific policy initiatives was decentralized to specific agencies. However, for the strategy as a whole, a promising trend emerged from the country research through the shifting of responsibility for implementation of the strategy to the president/prime minister's office (Germany, EU, Mexico, South Korea and Cameroon). Financing of the strategy process and for specific policy initiatives continues to be a major challenge. Innovation was demonstrated countries such as Costa Rica, Poland, Sweden and Brazil in generating revenue from ecological taxes and payment for ecological services. In developing countries, innovative mechanisms for donor co-ordination were also observed (e.g., Madagascar).

With regard to the implementation of specific policy initiatives, all of the countries studied are implementing a number of interesting policy initiatives that foster sustainable development that were not created under the guidance of a national SD strategy—suggesting that implementing SD related policy initiatives does not require a national SD strategy approach. While this may be true, implementing individual policy initiatives is not the purpose of a national SD strategy. Its value-added with regard to implementation is in strategic and co-ordinated action—a navigational tool for identifying priority sustainability issues, prioritizing objectives, and co-ordinating the development and use of a mix of policy initiatives to meet national goals.

It would appear that nations are in a maturation process in national SD strategies where many of the strategies serve partly as a means of post-rationalizing the mix of policy initiatives that have already been created from other existing political and institutional processes. For example, before the German government adopted a formal national SD strategy it had already adopted and implemented a number of policy initiatives for SD. Similarly, Sweden's national SD strategy presents existing cross-sectoral policies and processes within the framework of sustainable development. Also in Switzerland, almost all of the measures presented in the national SD strategy build on existing policies and/or initiatives that Switzerland has had in place for various lengths of time.

One explanation could be that quite naturally, of those countries that have adopted a comprehensive national SD strategy approach, countries new to the SD strategy process may be post-rationalizing the mix of SD policy initiatives that have already been created, while other countries with a longer history of SD strategies, are implementing policy initiatives influenced by the SD strategy itself, and not the other way around. Both will likely continue to occur to some degree, but it may be a few years before the objectives cited in national SD strategies begin to have more influence on the mix of policy initiatives implemented.

4.2.4 Key Learning Related to Monitoring, Learning and Adaptation

We refer to the combined aspects of monitoring, learning and adaptation as the feedback loop in the strategic management cycle. As already noted in Section 4.1, there are systemic weaknesses in the feedback loop based on the country research related to:

- Monitoring and reporting on progress of the strategy process;

- Monitoring and reporting on SD outcomes; and

- Formal and informal approaches and tools for learning and adaptation.

Only a handful of countries had approaches or tools in place to formally monitor and report on progress toward the implementation of initiatives put forth in the SD strategy. Among these countries were Canada, U.K., South Korea, EU, Germany, Cameroon and Madagascar through their PRSP process. The approaches and tools consisted of audit agencies and reports, spending reviews and minister's reports. Some countries had in place formal approaches and tools to monitor and report on economic, social and environmental trends. The approaches and tools consisted of national SD indicator systems and regularly reporting on trends (EU, U.K., Germany, Denmark, Costa Rica, Morocco, the Philippines and Switzerland), national accounts statistics, audit agencies and committees, independent advisory bodies and Internet databases. Some approaches and tools were observed to help ensure that something was learned from the monitoring efforts and that some adaptation occurred. This occurred through independent agencies and committees, task force bodies, strategy revision processes, advisory councils, progress reporting, research networks and public consultations. But these tools were primarily focused on process monitoring.

No clear examples of formal mechanisms for learning from SD indicator trends in order to adapt SD strategies were observed in the 19 countries studied. The reasons for this could be twofold. First, a certain degree of informality is inherent in learning. Steurer and Matinuzzi (2004) highlighted the differences between the planning and learning schools in relation to governance and policy-making. They note that management experts such as Lindblom (1959) and Mintzberg (1994) advocate that "strategies evolve, rather than through formalized planning procedures, conducted by distinctive planners." In fact, as Steurer and Martinuzzi identify, "the impossible predetermination of uncertainties and discontinuities, the detachment of thinking and acting, and the suppression of creative thinking through formalized planning, led Mintzberg to conclude that strategic planning is an oxymoron." Most central to this discussion perhaps, is their articulation of the national sustainable development strategy process as the continuum between the two extremes represented by the stifling nature of formal policy planning and the informal incrementalism of the learning

school. This implies that national sustainable development strategy processes will inevitably search for an effective balance of formal and informal approaches and tools for the ongoing learning and adaptation of national sustainable development strategies and the specific policy initiatives they implement.

A second possible reason for the lack of formal approaches to learning and adaptation observed in the case study research is the inherent difficulty in understanding causality between SD policy initiatives and SD outcomes, making formal learning a difficult task. A sign of this complexity can be seen in the number of international organizations currently trying to tackle this issue. UNEP's Global Environment Outlook is currently revising the policy analysis component of its Integrated Environmental Assessment process to better address some of the issues related to determining policy effectiveness. Similarly, the World Bank Institute is currently investigating methods for integrated policy analysis to meet the demands of its new Country Environmental Assessment process. These are but a few of the international organizations beginning to more seriously tackle this aspect of strategic management.

4.2.5   Key Learning Related to Co-ordination

Challenges seem to abound in relation to aspects of co-ordination of the SD strategy process. The primary horizontal and vertical co-ordination challenges have already been identified—that related to the weak linkages between national SD strategies and the national budget processes, and weak linkages with sub-national strategies. Another challenge that was featured in this project was co-ordination with other national-level strategy processes.

The Philippines emerged from the country research as a leader in innovative approaches and tools that work to address the challenges of co-ordinating with the national budgeting process, while other countries such as Denmark, South Korea, China and Costa Rica were adept at co-ordinating with other levels of government.

The case study research also highlighted a horizontal co-ordination deficit in the form of the "administrative trap."

> "The Administrative Trap" – Government administrative structures organized... into sectoral, or functional, ministries and departments. This works reasonably well until the system encounters a problem of very broad and highly integrated nature—such as desertification. Then it tackles the parts which are identifiable to each ministry and then each ministry tackles the symptom as a problem in, and of, itself (Carley and Christie 2000)."

The administrative trap was most apparent for the countries that have pursued a sectoral SD strategy approach (i.e., Canada) or a cross-sectoral strategy approach (particularly Cameroon and Madagascar). Canada faces a significant challenge in ensuring a level of co-ordination among 29 departmental SD strategies which are produced every three years. A few approaches and tools have been developed for this purpose, so it would be useful for other countries to learn from Canada's future experiences in this regard.

In Cameroon and Madagascar there was a lack of co-ordination and communication between the national environmental management strategy process and the poverty reduction strategy paper process. One might conclude that this is a capacity issue (financial and available staff), but the international community was also involved to a degree in both strategy processes and connections were still not identified (understanding the linkages between ecosystem services and human well-being is a critical component of SD), nor the co-ordination emphasized sufficiently.

Countries pursuing comprehensive, multi-dimensional SD strategies were also not immune to the administrative trap. The trap was not as deep though, owing to the permanent multi-stakeholder councils that are characteristic of countries that pursue such strategies. These national councils for SD or like bodies evolved out of necessity in order to develop a strategy that crosses all sectoral lines, and therefore, involving many different stakeholders. Thus the sophistication of co-ordination mechanisms appears to be greater for such strategies; examples being the Philippines Council for SD and China's Administrative Centre for China's Agenda 21 (ACCA21).

4.2.6   Key Learning Related to Participation

The extent of participation in a strategy process defines the ownership of the strategy. A truly national strategy will have in place a participation approach that obtains the collective feedback of all stakeholders in the country. Participation that falls shy of this mark would reflect more a national governmental strategy for SD. The dividing line between the two however, is not always clear.

The case study research illustrated that significant improvements have been made in participatory planning since the 1992 Earth Summit. But this does not

mean that challenges no longer exist. The key challenges elaborated on in Section 3 included institutionalizing participation and building trust.

All countries studied employed various approaches and tools for institutionalizing participation, including national councils for SD (e.g., Philippines, Mexico, South Korea, Brazil and Germany), cross-sectoral councils or networks (e.g., Cameroon, Madagascar and South Korea), independent advisory bodies (e.g., U.K., Canada and the EU), place-based councils (e.g., Costa Rica), and ad hoc participation (e.g., Canada, Denmark, Morocco, Poland, Sweden and Switzerland). In all, the advancements in participatory governance has been quite significant since the concept of sustainable development was first mainstreamed in the late 1980s and early 1990s.

The case study research highlighted building trust as an important part of the participation process. Mexico used some innovative advertising and media-based methods for obtaining members for its national SD council, and Brazil explicitly recognized the importance of explicit attention to conflict management. Similarly, one thing that was learned in the Costa Rica case is the importance for Local Agenda 21 efforts to be accompanied by the development of community building and negotiation skills at the local level. Without such capacity there is the potential for the process to be unnecessarily divisive.

IWRM Feature 15. Overview of Key Learning Related to National Efforts Toward Integrated Water Resource Management

Introducing the process of IWRM into traditional water resources planning is analogous to the introduction of SD strategies into traditional national development planning efforts. The *IWRM Feature Boxes* interspersed throughout this report demonstrated this and highlighted important learning and innovation relevant to national SD strategy processes.

In considering the big picture, the IWRM cycle introduced in *IWRM Feature 2* illustrated that strategic aspects of leadership, planning, implementation, and monitoring are a critical part of the means by which the Global Water Partnership is recommending that nations proceed in meeting the 2005 Johannesburg Plan of Implementation target for producing national IWRM plans. Strategic management plays a fundamental role in both of these national endeavours.

In considering the strategic aspect of leadership, Switzerland's national IWRM plan, highlighted in *IWRM*

Feature 4, illustrated how the complexities of understanding the interdependency of actions in different sectors and action in different localities, can be pragmatically handled. Specifically, IWRM efforts have learned through experience that to deal with the interdependencies, the spatial reference for integrated water resources management is best taken as the catchment area or river/lake/groundwater basin, rather than the political or administrative borders. This is an aspect that has not yet permeated national SD strategy processes.

But IWRM also understands the need for national-level strategic and co-ordinated action through acknowledging that many policy decisions affecting water management—within or between sectors (such as food, health, energy, etc.) —can be taken only at the national level, not at the basin level. So efforts toward IWRM have learned that an effective strategic process must operate within the pertinent spatial unit in order to deal with complex inter-dependencies, but must integrate with higher and other jurisdictional units to access the levers of change.

With regard to the planning aspects of strategic management, the EU demonstrated long-term planning initiative through its Water Framework Directive (*IWRM Feature 5*). This comprehensive strategy for IWRM for EU countries had several interesting features. One was its detailed nature and the setting of time-bound output targets for each stage of the strategic process. Interesting and important to note is that the entry point for the strategy was detailed monitoring and characterization of pressures and impacts within the water basins before carrying out any detailed planning.

Related to implementation aspects, the EU Water Framework Directive recognized the importance of leveraging a mix of policy initiatives and established a target for the introduction of pricing policies by 2010. *IWRM Feature 6* highlighted an interesting mix of financial arrangements for implementing IWRM initiatives in the Philippines Agno River Basin. The mix included the adoption of build-operate-transfer schemes, the inclusion of basin-related programs and projects in the budget of local government units and agencies, and a combination of local and foreign fund sources.

In relation to monitoring, learning and adaptation aspects, it was interesting to learn of the number regional learning networks that have emerged for the sharing of best practices in IWRM. The Network of Asian River Basin Organizations (NARBO), the Inter-American Water Resources Network (IWRN), and the Caribbean's Integrated Watershed and Coastal Zone Management project (IWCAM)—all highlighted in *IWRM Feature 8*—were all dedicated to identifying innovations and to learning and adapting IWRM approaches of

the members. For national SD strategies, the UN Division for Sustainable Development provides an ongoing forum for the learning and adaptation of national SD strategies, but it is interesting that few regional ongoing learning networks have emerged in relation to national, sub-national, and local SD strategies. One example is an informal network among the 25 EU countries consisting of national and EU SD focal points. This network is in its third year.

IWRM efforts in Mexico highlighted an interesting observation with respect to participation and the role of basin-wide modelling. The Mexico experience noted that "modeling accompanies negotiation of which it becomes the central process." It is further described that "actors want their solutions, and their perception of the problem, to be tested and that "modeling also acquires its own legitimacy, firstly through experts appointed by opposing parties, which leads to transparent, open programming." This learning is consistent with the notions of adaptive management and civic science introduced in 1993 by Kai Lee in dealing with issues of salmon restoration and hydropower generation in the Columbian River Basin in the Pacific Northwest of the United States (Lee 1993). It also mirrors the experiences of

Stephen Lansing in studying the critical role of water temple priest in the adaptive management of rice growing in Bali, Indonesia (Lansing 1991). These are important lessons for the use of modelling technologies in making stakeholder participation more effective in all stages of the national SD strategy process at the specific issue level.

Given the similarities in both process (e.g., a continuous strategic management cycle) and objectives (e.g., sustainable development), the potential benefits of cross-learning and the need for co-ordination are significant. With detailed attention to many key sectors being an essential part of public management, one can envision a number of iterative national strategy processes functioning at once including IWRM and national energy strategies, among others. An important area of further research would be to identify the specific function that the national SD strategy process serves in relation to key sector-specific strategies. For example, what specific approaches and tools in the national SD strategy process could be developed to help leverage the many mutually reinforcing aspects of sector-related strategies, and to help ensure that key sector-related strategies are indeed mutually reinforcing.

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ANNEX 1.
Analytic Questions for Country Case Study Research

Issues	Strategic and Co-ordination Aspects

Strategy content overview	• Strategy approach
	  – Comprehensive SD strategy (e.g., National SD Strategy)?
	  – Cross-sectoral strategies related to SD (e.g., National Environmental Plans, Poverty Reduction Strategy Paper)?
	  – Sectoral SD strategies (e.g., departmental SD strategies)?
	  – Other?
	• Strategy content
	  – Goals and thematic areas
	  – Structure of the strategy
	• Co-ordination and linkages with other strategies or planning processes
	  – Linkages with other national SD-related strategies
	  – Linkages to the national planning/budgeting process
	• Integration of SD principles
	  – Integration of economic, social and environmental considerations?
	  – Integration of the needs of present and future generations?

Strategy development and institutional aspects	• Formal legal basis
	  – Adopted when and through what legal basis
	• State of the process of SDS and decision mechanisms
	  – Did the strategy emerge from an existing process?
	  – Initiators and champions, main actors
	  – Agency in charge of the strategy
	• Negotiation and conflict resolution mechanisms
	• Communication mechanisms
	• External support for development

Participation aspects	• Co-ordination of inter-governmental negotiations and decision-making
	  – National council or commission for SD
	  – Conflict resolution mechanisms
	  – Level of government participation
	  – Inter-governmental negotiations and decision-making
	• Role and integration of non-governmental actors, character of the policy process (e.g., open/closed)
	  – Non-governmental actors and other stakeholders

Monitoring, learning and adaptation aspects	• Monitoring and evaluation systems
	  – Mechanisms to determine whether the strategy's objectives are being met
	  – Who is responsible for monitoring and reporting?
	  – Progress monitoring, evaluation and reporting (indicators and targets)
	• Responsibilities
	• Processes for ongoing learning and adaptation of strategy
	• Strategic assessment of policies and programs

Implementation aspects and specific initiatives	• Accountability for implementation
	• Co-ordination of implementation
	• Financing for implementation
	• Communication
	• Specific SD initiatives
	  – Overview of initiatives
	  – Innovative initiatives

ANNEX 2.
Country Research on Integrated Water Resource Management

To conduct the IWRM research, appropriate contacts were identified for each country and then these persons were asked to complete a brief survey either by e-mail or telephone. The specific research questions used for the country IWRM surveys are summarized below.

Country Survey of Integrated Water Resource Management Efforts

1. How would you describe your country's level of commitment to meeting the IWRM 2005 commitment to water efficiency and IWRM plans?

2. Do you have officials actively engaged in preparing a response to this WSSD JPOI commitment?

3. What is the likelihood that you will produce a national IWRM and/or water efficiency plan by the 2005 target?

4. The concept of IWRM is well-recognized, but not well-defined, and there are many international organizations attempting to offer clarity, such as the Global Water Partnership (GWP). How would you define IWRM and what document(s) is your department/ministry/government using as a basis for defining this process?

5. One of the tenets of IWRM is a consultative, "bottom up" approach to decision-making. Could you describe the process you'll use to garner input?

Annex 3.
Summary of Specific Policy Initiatives Featured in the Country Case Studies

Note:

- This table is not meant as a comprehensive policy analysis; rather, it simply lists the policy initiatives that were featured in the country case studies.

- Columns are listed in alphabetical order by country.

Economic Initiatives	Regulatory Initiatives	Expenditure Initiatives	Institutional Initiatives
EU – Infrastructure charging	Brazil – Law of Environmental Crimes (Law 9605)	Brazil – Amazon Deforestation Control	Cameroon – National Poverty Reduction Network
Brazil – Ecological Value-Added Tax (ICMS Ecologico)	EU – Biofuels (2003-)	Canada – Canada's Global Partnership Program	Cameroon – Progress Reporting on Millennium Development Goals
Canada – Ecological Gifts Program	EU – Chemical Policy REACH (registration, evaluation and authori-zation of chemicals)	China – Capacity 21, from the national to local level practice on sustainable develop-ment and China's Agenda 21	Canada – Agricultural Policy Framework; Canada's Innovation Strategy; Canada's Ocean Strategy; Canada Making a Difference in the World: Policy Statement on Strengthening Aid Effectiveness; The Climate Change Plan for Canada; and Straight Ahead: A Vision for Transportation in Canada
EU – Emission trading	Madagascar – MECIE Decree (Mise en Compatibilité des Investissements avec l'Environnement) – a set of regulations gov-erning environmental aspects of investment in Madagascar	China – Communication to UNCCC	China – EU-China Liaoning Integrated Environmental Program
Costa Rica – Payment for Environmental Services		China – Ecological pro-tection program at river cradle	Costa Rica – National Institute of Biodiversity
Philippines – Pollution Charge Program	Philippines – Environmental Impact Assessment (EIA)	China – Environmental Management Cooperation Program	Costa Rica – SINADES, the National System of Sustainable Development
Philippines – Environment and Natural Resources Accounting (ENRA)	Philippines – National Land Use Act	China – Sustainable land use in China	Denmark – A Nordic Set of Indicators, 2003 for the Nordic Strategy for Sustainable Development, 2001
Germany – Ecological Tax Reform	South Korea – Special Act on Seoul Metropolitan Air Quality	Denmark – Agreements with the automobile industry to improve fuel consumption by vehicles	Denmark – A World of Difference – The Government's Vision for New Priorities in Danish Development Assistance 2004–2008, June 2003
Philippines – study on the Implementation of Selected Market-based Instruments for Air and Water Pollution Control	Switzerland – The adoption of the new Federal Swiss Constitution enshrines sustainable develop-ment	Denmark – Partnership for the Environment and Industry, 2003	Denmark – Action Plan for "education on sustain-able development"
		Denmark – Strategic research programs, 2003	Denmark – Action Plan for biodiversity, 2003
South Korea – The Korean System of Integrated Environmental and Economic Accounting (KORSEEA)		Germany – Phasing out of Nuclear Power	Denmark – Action Plan for reducing CO_2-emis-sions in the transport sector, April 2001
		Germany – Promoting Renewable Energies	Denmark – Danish National Forest Program, 2002
Sweden – Environmental Tax Reform		Mexico – Environmental Education	Denmark – Guidelines for public procurement of tropical wood, June 2003
U.K. — Fuel duty differential		Mexico – Programs to combat poverty	Denmark – Pesticide Plan, October 2003
U.K. – Increased duty on petrol		Mexico – U.S.-Mexico Border Program	Denmark – Proposal for a Climate Strategy, February 2003
			Denmark – Strategy for Health and the Environment, June 2003
			Denmark – Waste Strategy for 2005–2008, 2003
			Denmark – New initiatives in the energy saving report, 2003

Economic Initiatives	Regulatory Initiatives	Expenditure Initiatives	Institutional Initiatives
U.K. – Landfill tax U.K. – Levy on business use of energy U.K. – Revenue-neutral reform of car taxation		Morocco – Capacity 21-efficient use of fuel Morocco – Greenstar, US$1.49 million to launch income-generating renewable energy enterprises Morocco – Introduction of environment-related courses within the first and secondary education Morocco – Energy Management Project in Moroccan Industry Sector Morocco – Public-private partnership between government and NGO sector Morocco – Training and information project for the judiciary Morocco – Clean Development Mechanism (CDM) Program Philippines – Global Program on Land-based Sources of Pollution Poland – Polish Development Portal South Korea – Environmental Technology Evaluation System South Korea – government will invest approximately one trillion Korean won to support research and production of new environmental technologies under the Eco-Technopia-Project Sweden – Integrated Product Policy Switzerland – MONET is an indicator system created for the monitoring of sustainable development (Monitoring Nachhaltiger Entwicklung)	EU – EU action plan to boost Environmental Technologies for innovation, growth and sustainable development (2004) EU – Integrated product policy (IPP) EU – Sustainability Impact Assessments of Trade Agreements Germany – National Climate Protection Program India – Civil service reforms India – Joint Forest Management Madagascar – Action Plan for Rural Development (PADR) Madagascar – National strategic plan to combat the spread of HIV/AIDS Mexico – Environmental Health Action Program Morocco – Centre of Information on Sustainable Energies and Environment (CIEDE) Morocco – Strategy for the development of renewable energies Philippines – Cabinet Committee on Marine and Ocean Affairs Philippines – Environment and Natural Resource (ENR) Database (DBAS) Philippines – Integration of Environmental and Socio-Economic Development Policies (SEI) Philippines – National Integrated Coastal and Marine Management Strategy Philippines – Program Management Support System (PMSS) for SD Philippines – Sustainable Development Models (SDM) – Indicator development Poland – VASAB 2010, this intergovernmental program of 10 countries of the Baltic Sea Region is a multilateral cooperation in spatial planning and development, established in 1992 South Africa – Committee for Environmental Co-ordination South Korea – Basic Plan for Restructuring of the Energy Supply Industry (2002–2009) South Korea – Environmental Industries Development Strategy (2001–2003) South Korea – Ten-Year National Plan for Energy Technology Development (1997–2006) Sweden – Environmental Quality Objectives Sweden – National Committee on Agenda 21 and Habitat

The 2002 World Summit on Sustainable Development reiterated a call to all countries to "make progress in the formulation and elaboration of national strategies for sustainable development" and also to begin their implementation by 2005. A national sustainable development strategy is not simply a document, but rather it is a continuing and adaptive process of strategic and co-ordinated action.

To assist government sustainable development officials in realizing this continuous and adaptive process, this report builds on current thinking and studies 19 developed and developing countries to identify key challenges faced by countries in relation to the strategic management aspects of national sustainable development strategies including leadership, planning, implementation, monitoring and review, co-ordination, and participation. The innovative approaches and tools observed in the 19 countries studied in relation to these strategic management aspects are featured to create a pragmatic toolbox for government sustainable development managers and policy-makers.

Visit the project Web sites at
http://www.iisd.org/measure/capacity/sdsip.asp
and
http://www.gtz.de/rioplus/download

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